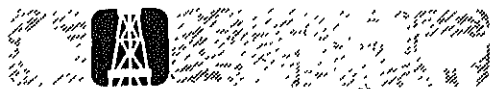
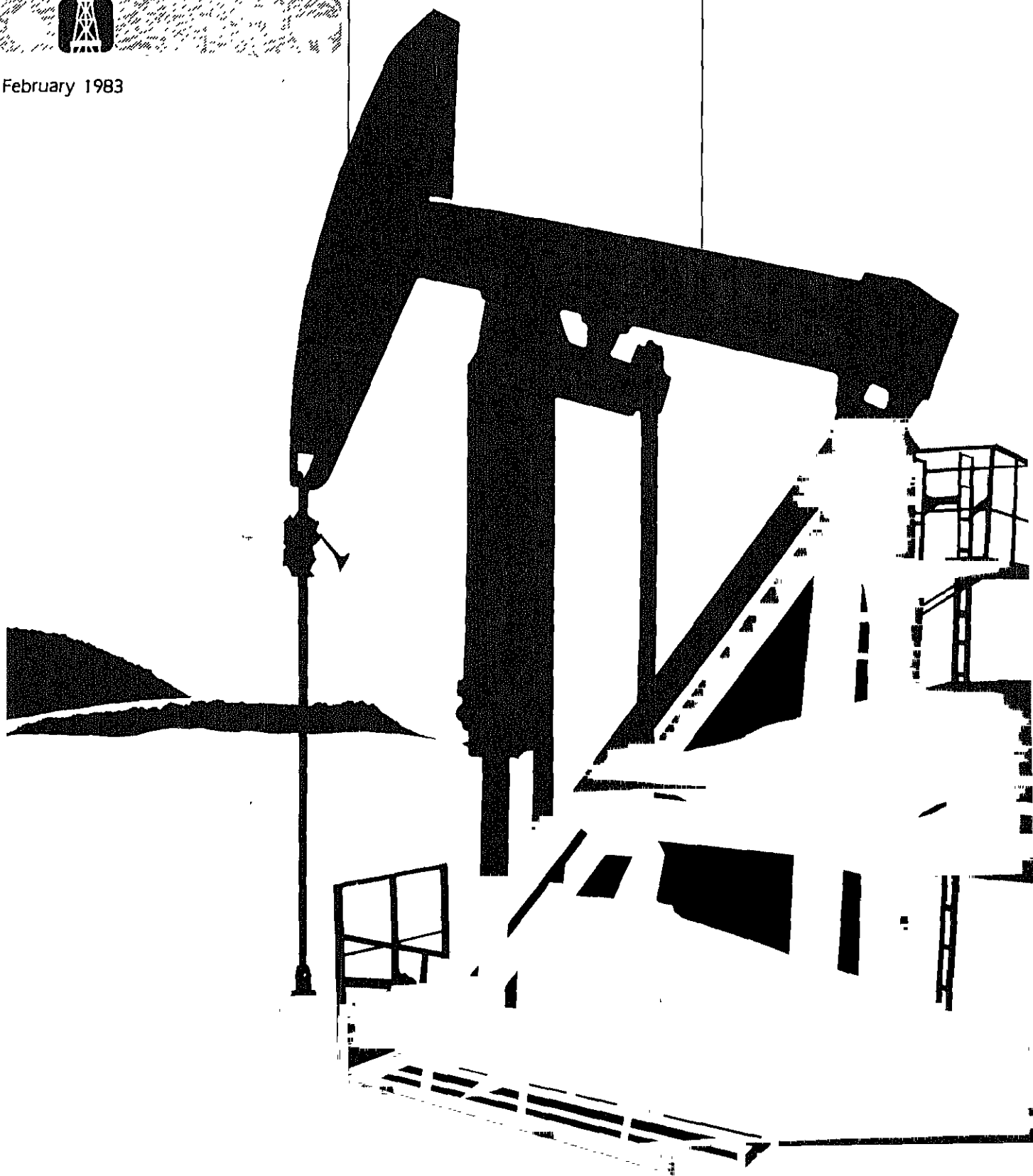


# Petroleum Supply Monthly



February 1983

Energy Information Administration  
Washington, D.C.



# Petroleum Supply Monthly

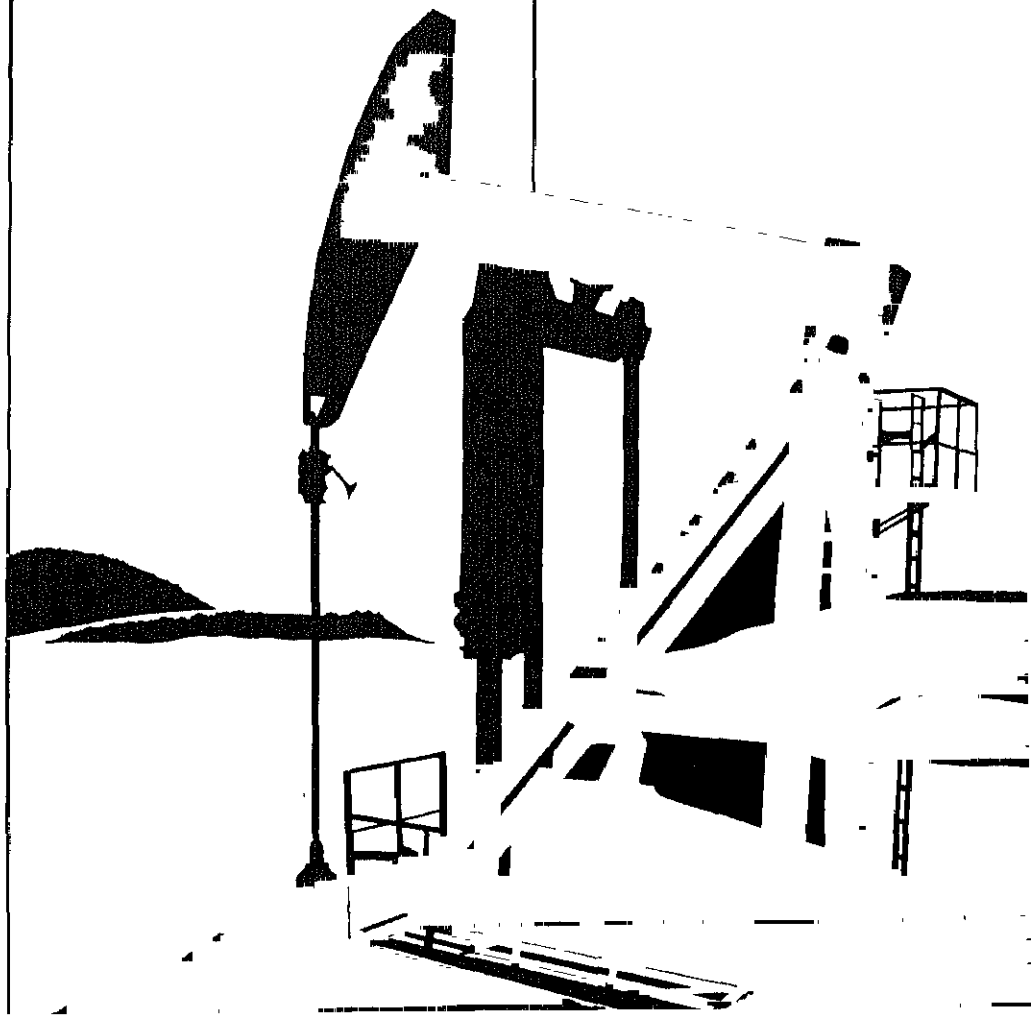


February 1983

**Energy Information Administration**  
Washington, D.C. 20585

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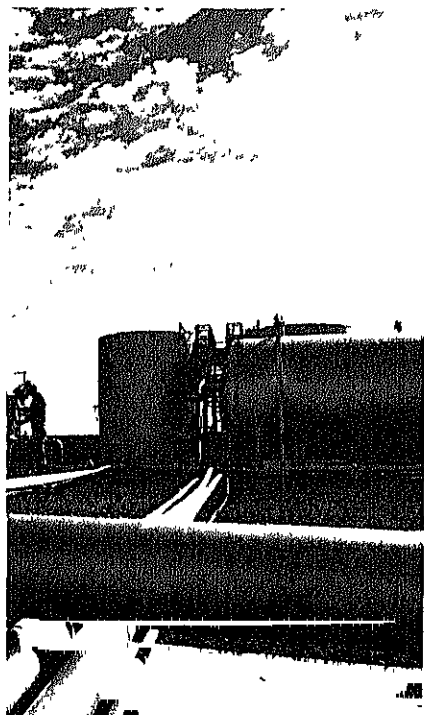
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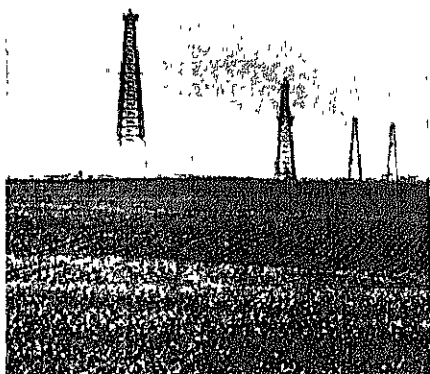
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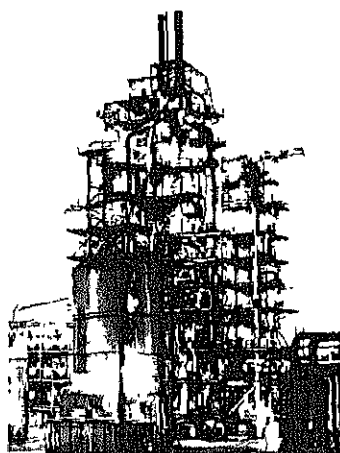
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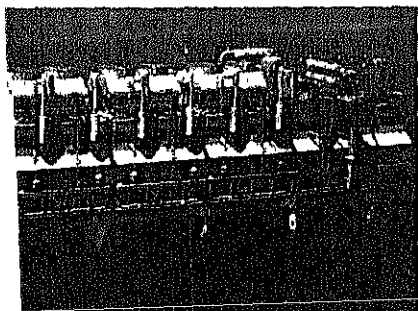


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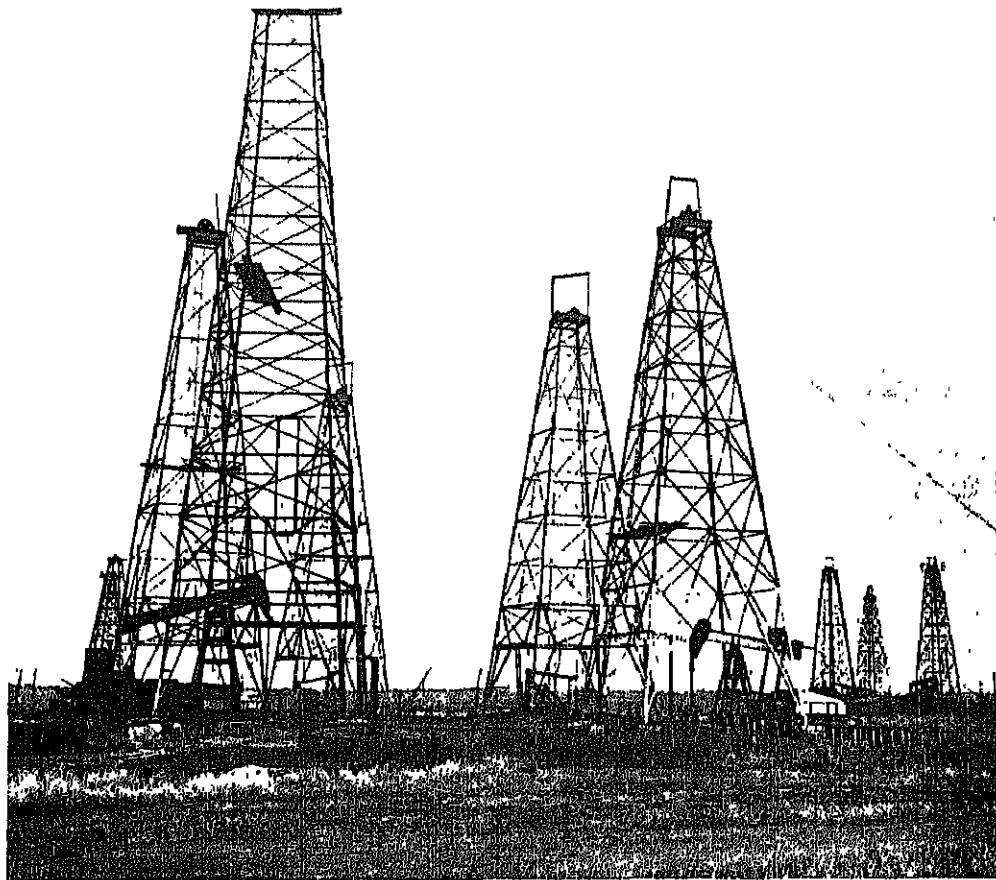
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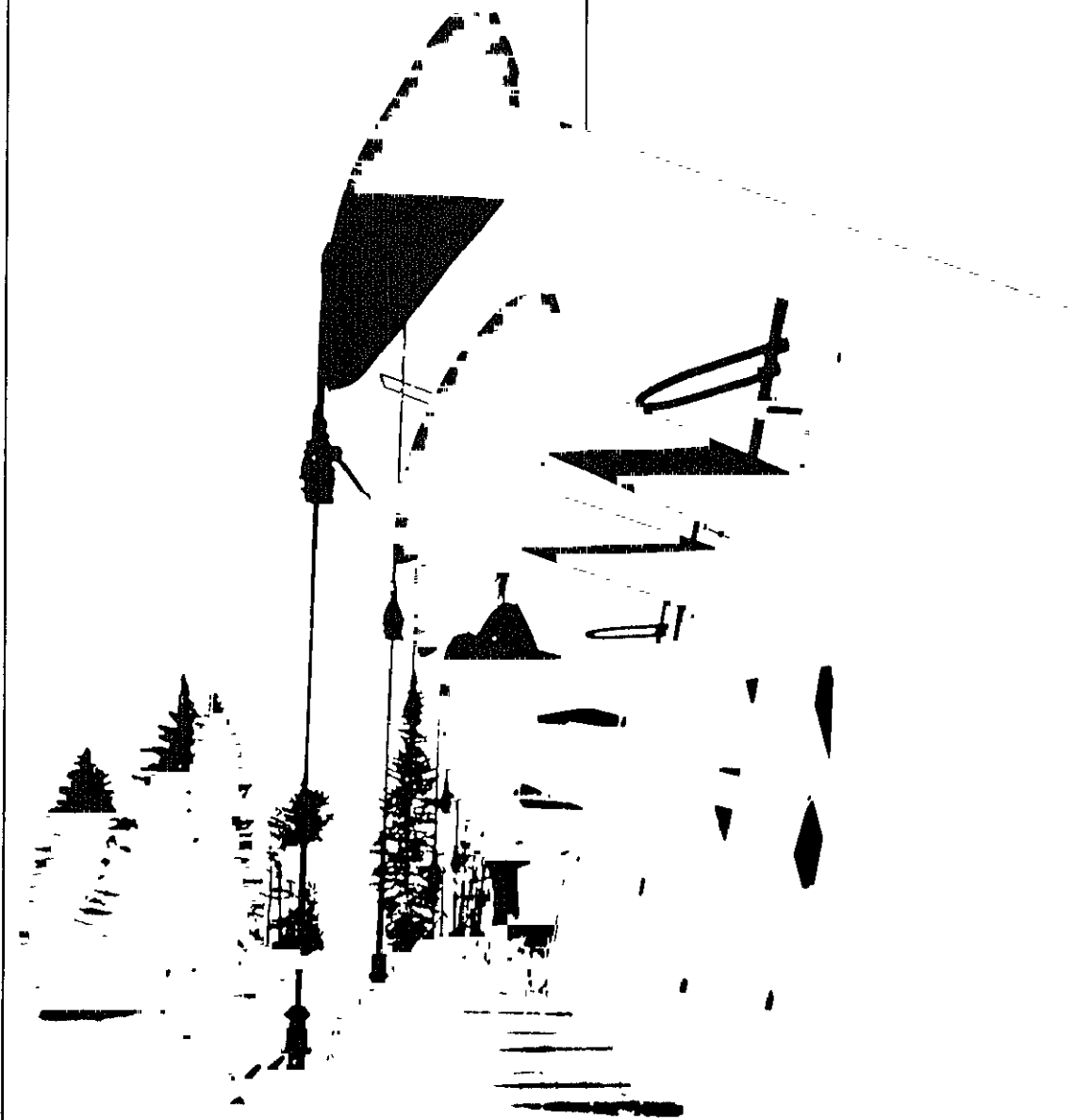
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# Petroleum Focus







# Petroleum Supply Summary

Average Volume for Period (Million Barrels Per Day)	January		
	1983	1982	% Change
Total Product Supplied	15.3	15.9	-3.6
Motor Gasoline	6.0	5.9	0.7
Distillate Fuel Oil	3.1	3.4	-10.4
Residual Fuel Oil	1.8	2.1	-15.1
Crude Inputs to Refineries	11.3	11.6	-3.0
Crude Oil and Natural Gas			
Liquids Production	10.3	10.2	0.5
Net Imports <sup>1</sup>	3.4	4.4	-21.8
Net Crude Oil Imports <sup>2</sup>	2.6	3.2	-18.6
SPR Imports	0.2	0.2	11.2
Net Product Imports	0.6	1.0	-37.8
Crude Oil Stock Withdrawal <sup>3</sup>	-0.09	-0.08	-
Product Stock Withdrawal	1.14	1.13	-
Stocks at End of Period (Million Barrels)			
Crude Oil <sup>3</sup>	356	371	-4.0
Motor Gasoline <sup>3</sup>	243	262	-7.4
Distillate Fuel Oil	160	166	-3.6
Residual Fuel Oil	56	68	-17.6
Total Product	758	855	-11.3
SPR	300	235	27.4
Total	1,414	1,461	-3.2

<sup>1</sup>Gross imports of crude oil including Strategic Petroleum Reserve (SPR) and petroleum products less exports of crude oil and petroleum products.

<sup>2</sup>Excluding SPR.

<sup>3</sup>Including blending components.

Note: Percent changes are based on unrounded values. January 1983 data are estimates based on weekly data, except for export estimates which are December 1982 monthly values.

Source: Energy Information Administration, *Petroleum Supply Monthly*, February 1983.

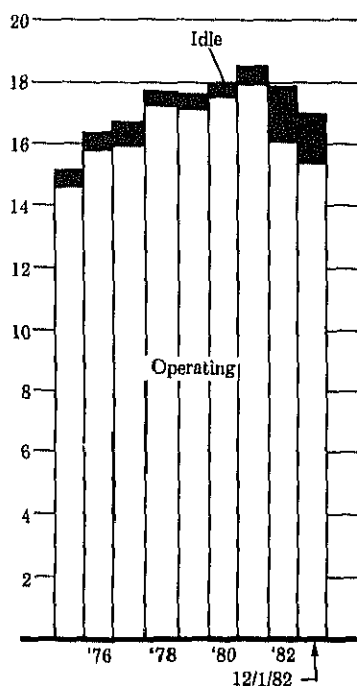
# Refinery Shutdowns During 1982

During 1982, 57 refineries with more than 1.1 million barrels per calendar day of crude oil distillation capacity were shut down (see Table 1). In addition, at yearend, 1.5 million barrels per day of refinery capacity was reported as idle but capable of being brought into operation in 90 days (see figure 1).<sup>1</sup> The refinery closings in 1982 and the large reduction in U.S. refining capacity continued the trend started in 1981. During that year, 23 refineries with 451 thousand barrels per day of crude oil distillation capacity closed; in addition, 260 thousand barrels per day (net) of crude oil distillation capacity was shut down in refineries that remained operable. These shutdowns ended an uninterrupted trend in refinery capacity expansions that began in 1967.<sup>2</sup>

The refineries that were shut down during 1982 had some common characteristics (age, size, complexity, and location):

- About 40 percent of the refineries that were shut down had operated for 25 years or more. Another 40 percent of the refineries that were shut down were less than 5 years old.
- More than half of the refineries that were shut down had a crude oil distillation capacity of less than 10 thousand barrels per day, and 90 percent had a crude oil distillation capacity of less than 50 thousand barrels per day.
- More than 60 percent of the refineries that were shut down had no downstream processing capability.
- Most of the larger and older refineries that were shut down were in the Midwest and on the East Coast; most of the smaller and newer refineries that were shut down were on the Gulf Coast.

Figure 1. Operable Refinery Capacity as of January 1  
(Million Barrels per Day)



Source: *Petroleum Supply Monthly*, January 1983; *Petroleum Supply Annual* 1981; *Location of Petroleum Refineries in the United States and U.S. Territories, 1976-1980*.

The 1982 refinery shutdowns were primarily the result of shifts in petroleum demand, economic factors, and changes in governmental regulations. Total petroleum consumption (measured as petroleum products supplied) decreased during 1982, but consumption of lighter products, such as gasoline and jet fuels, accounted for an increased share of the total. Smaller, less-complex refineries, which were unable to produce more light products from less-expensive, heavy, high-sulfur crude oil, were at an economic disadvantage. Many of these small refineries, which benefitted from lower crude oil prices under the Crude Oil Entitlements Program, became unprofitable when the program was phased out in early 1981.

The drop in refinery capacity is associated with a drop in petroleum products supplied. During the past 4 years, total petroleum products supplied

<sup>1</sup>See explanatory notes for capacity definitions.

<sup>2</sup>Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0304(81) (Washington D.C.: 1981); Energy Information Administration, *Petroleum Refineries in the United States and U.S. Territories*, DOE/EIA-0111 (Washington D.C.: 1978, 1979, 1980, 1981).

dropped 19 percent, from 18.8 million barrels per day in 1978 to 15.2 million barrels per day in 1982 (see Figure 2). Refinery capacity peaked at 18.6 million barrels per day in January 1981, 3 years after petroleum products supplied peaked.<sup>3</sup> During the past 2 years, refinery capacity has decreased 8 percent to 17.1 million barrels per day.<sup>4</sup>

### Refinery Age

Twenty-three of the 57 refineries shut down during 1982 had been operating more than 25 years. These older refineries were located primarily in the East and Midwest (see Table 1). All three refineries shut down on the East Coast and 12 of the 14 refineries shut down in the Midwest had been operating more than 25 years.

Twenty-three of the shutdown refineries had been operating less than 5 years. Twenty of these newer refineries were in the Gulf Coast region. These refineries were built when the Crude Oil Entitlements Program was in effect (1974-1981). This Federal program gave small refiners a significant crude-oil-cost advantage over large refiners. When the Entitlements Program was eliminated, small refiners lost this advantage, and many closed.

### Refinery Size

The refineries shut down during 1982 were, in general, smaller than those remaining in operation. As of January 1, 1982, the number of refineries with a capacity of 50 thousand barrels per day or less accounted for 67 percent of all refineries, but they accounted for about 90 percent of the number shut down.

The number of operable, smaller refineries has decreased significantly since 1980, while the number of larger refineries has decreased only slightly (see Figure 3). In 1980, there were 91 refineries with a capacity of 10 thousand barrels per day or less; by the end of 1982, there were only 44 operable refineries of this size. During the same period, the number of larger refineries (those with capacities over 175 thousand barrels per day) dropped from 27 to 22. The largest refinery that closed was the Dow Chemical U.S.A. refinery in Freeport, Texas, which had a capacity of 190 thousand barrels per day.

### Refinery Complexity

The refineries that were shut down in 1982 were, in general, less complex than the average U.S. refinery (see Table 2). Thirty-six of the 57 shutdown refineries had no vacuum distillation, catalytic cracking, hydrocracking, catalytic hydrotreating, or catalytic hydrotreating equipment. These downstream processes are used to increase the output of light products, to remove sulfur and metals from a variety of feedstocks and to improve the quality and yield of gasoline. Several of the other 21 shutdown refineries were quite large and complex. Together all 21 had 1.1 million barrels per day of downstream facilities, 4 percent of the nation's total at the beginning of 1982.

Refineries with substantial downstream capabilities usually have an economic advantage over less complex refineries because of economies of scale and because they can produce more of the higher-priced, lighter products from less costly crude oil (i.e. heavy, high-sulfur). Because they lacked downstream flexibility, most of the shutdown refineries could process only sweet and light, low-sulfur crude oils. In early 1982, U.S. refiners projected that, on the average, 54 percent of their crude oil inputs during 1982 would be sweet, low-sulfur, and light, medium-sulfur crude oils. For approximately two-out-of-three of the shutdown refineries, owners projected that their crude oil inputs would be entirely sweet crude oil or light, medium-sulfur crude oil.

Most of the shutdown refineries were designed to produce less of the lighter transportation fuels and more of the heavier products such as residual fuel oil and asphalt than the national average. Average yields for the shutdown refineries, projected in January 1982 for the remainder of the year, were 41 percent motor gasoline, 18 percent distillate fuel oil, and 24 percent residual fuel oil. Average yields of these products for all U.S. refineries, projected in January 1982, were 47 percent, 18 percent, and 9 percent, respectively.<sup>5</sup>

<sup>3</sup>Energy Information Administration *Petroleum Supply Monthly*, DOE/EIA-0109(8802) Washington D.C.: February 1983, p. 18

<sup>4</sup>*Petroleum Supply Monthly*, Table 15.

<sup>5</sup>*Petroleum Supply Annual*, Table 7.

**Table 1. Refineries Shutdown Between January 1, 1982 and December 1, 1982.**

District/Refinery	Location	Crude Distillation Capacity (B/CD)	Total Downstream Capacity (B/SD)	Years in Operation
<b>East Coast (PAD District I)</b>				
Amoco Oil Co.	Baltimore, Maryland	15,000	0	25+
Ashland Oil, Inc.	Buffalo, New York	64,000	87,200	25+
Seminole Refining, Inc.	St. Marks, Florida	15,000	10,000	25+
Total		94,000	97,200	—
<b>Midwest (PAD District II)</b>				
Amoco Oil Co.	Sugar Creek, Missouri	104,000	185,500	25+
Ashland Oil, Inc.	Findlay, Ohio	20,400	12,000	25+
CRA, Inc.	Scottsbluff, Nebraska	5,600	3,650	25+
CRA, Inc.	Phillipsburg, Kansas	26,400	32,100	25+
Dillman Oil Recovery, Inc.	Oblong, Illinois	1,200	0	4
E-Z Serv Refining, Inc.	Shallow Water, Kansas	9,500	0	25+
Energy Cooperative, Inc.	East Chicago, Indiana	126,000	190,000	25+
Industrial Fuel & Asphalt of Indiana, Inc.	Hammond, Indiana	7,600	0	25+
Kentucky Oil & Refining Co.	Betsy Lane, Kentucky	3,000	0	25+
Mid-America Refining Co. Inc.	Chanute, Kansas	3,000	1,800	25+
Northland Oil & Refining Co.	Dickinson, North Dakota	5,000	0	7
Phillips Petroleum Co.	Kansas City, Kansas	80,000	156,700	25+
Texaco, Inc.	West Tulsa, Oklahoma	50,000	89,000	25+
Texas America Petrochemicals Inc.	West Branch, Michigan	11,500	3,200	25+
Total		453,200	673,950	—
<b>Gulf Coast (PAD District III)</b>				
Bayou State Oil Corp.	Hosston, Louisiana	3,000	0	25+
Bronco Refining Co.	Houston, Texas	2,250	0	1
Caribou-Four Corners Oil Co.	Kirtland, New Mexico	2,400	1,200	17
Clinton Manges	Palestine, Texas	6,000	0	25+
Copano Refining Co.	Ingleside, Texas	11,100	0	4
Dow Chemical U.S.A.	Freeport, Texas	190,000	143,000	1
Eagle Refining Corp.	Jacksboro, Texas	1,800	0	1
Hant Industries, Inc.	Farmington, New Mexico	13,500	5,000	7
Independent Refining Corp.	Pt. Neches, Texas	30,000	0	4
Independent Refining Corp.	Winnie, Texas	50,000	63,000	23
Lake Charles Refining Co.	Lake Charles, Louisiana	28,000	0	2
Listo Refining Co.	Donna, Texas	3,500	0	4
Longview Refining Co.	Longview, Texas	14,000	14,000	25+
Natchez Refining Co.	Natchez, Mississippi	16,000	0	2
Petraco-Valley Oil & Refining Co.	Brownsville, Texas	12,300	0	2
Placid Oil Co.	Mont Belvieu, Texas	8,500	0	2
Quitman Refining Co.	Quitman, Texas	6,600	0	4
Rio Grande Crude Refining	Brownsville, Texas	9,500	0	3
Rio Grande Recovery Systems, Inc.	Brownsville, Texas	1,000	0	2
Schulze Processing, Inc.	Tallulah, Louisiana	1,760	0	4
Sentry Refining, Inc.	Corpus Christi, Texas	25,000	0	4
Shepard Oil Co.	Jennings, Louisiana	10,000	0	4
Moore Refining Co.	Darrow, Louisiana	8,000	32,200	2
T & S Refining, Inc.	Jennings, Louisiana	10,500	0	2
VARCO	Eules, Texas	6,000	0	20
Upperary Refining Co.	Wickett, Texas	7,320	0	4
Vicksburg Refining Co.	Vicksburg, Mississippi	7,900	0	4
Wickett Refining Co.	Wickett, Texas	8,000	0	25+
Total		493,930	258,400	—

Barrels per Calendar Day  
Barrels per Stream Day

**Table 1. Refineries Shutdown Between January 1, 1982 and December 1, 1982 (Cont'd)**

District/Refinery	Location	Crude Distillation Capacity (B/CD)	Total Downstream Capacity (B/SD)	Years in Operation
<b>Rocky Mountain (PAD District IV)</b>				
C & H Refinery, Inc.	Lusk, Wyoming	180	0	25+
Caribou-Four Corners Oil Co.	Woods Cross, Utah	7,200	5,400	19
Glacier Park Co.	Osage, Wyoming	10,000	0	4
Husky Oil Co.	Cody, Wyoming	11,500	17,800	25+
Morrison Petroleum Co.	Woods Cross, Utah	6,300	0	8
Sage Creek Refining Co.	Cowley, Wyoming	1,000	0	17
Texaco, Inc.	Casper, Wyoming	21,000	35,500	25+
Total		57,180	58,700	—
<b>West Coast (PAD District V)</b>				
Gibson Oil & Refining Co.	Bakersfield, California	4,600	0	3
Lunday-Thagard Oil Co.	South Gate, California	12,000	0	14
Sabre Oil & Refining, Inc.	Bakersfield, California	10,000	0	10
United Independent Oil Co.	Tacoma, Washington	730	0	7
West Coast Oil Co.	Oildale, California	21,000	0	25+
Total		48,330	0	—
<b>U.S. Total</b>		<b>1,146,640</b>	<b>1,088,250</b>	<b>—</b>

B/CD = Barrels per Calendar Day

B/SD = Barrels per Stream Day

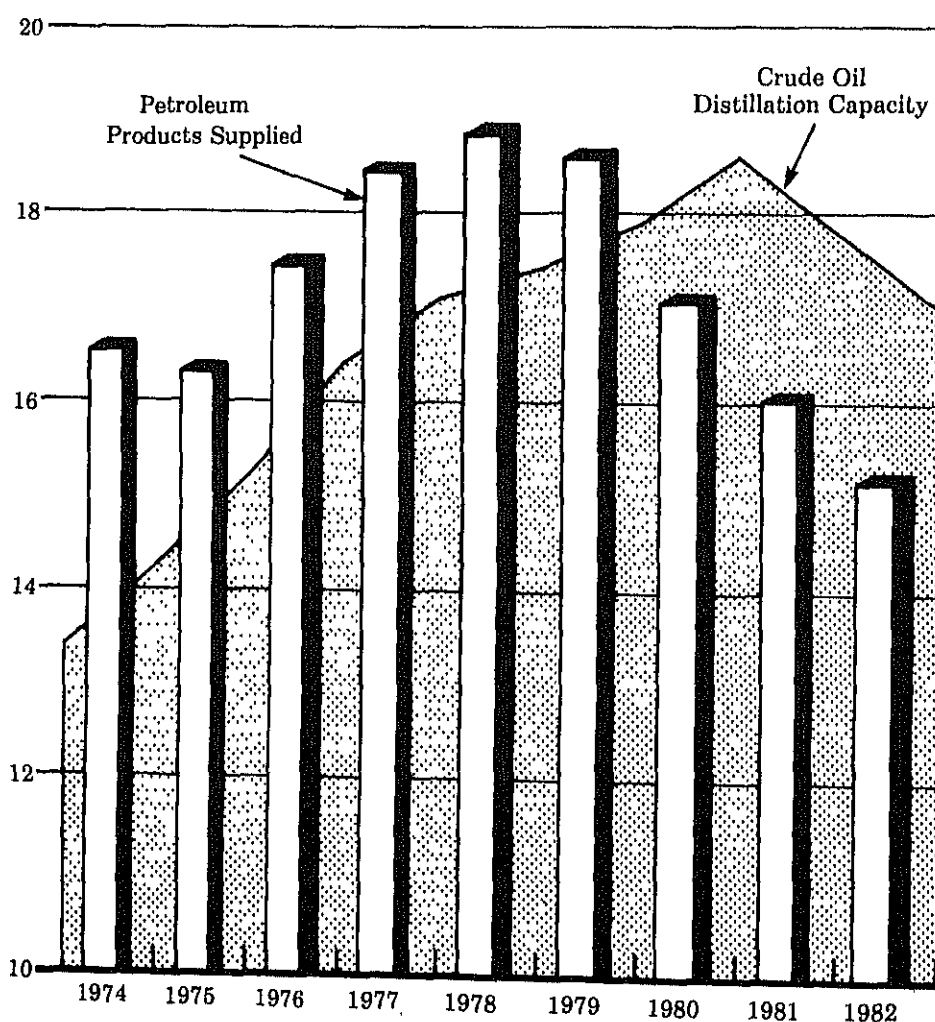
**Table 2. Capacity of U.S. Refineries Compared with Capacity of Shutdown Refineries**

Type of Capacity	Total U.S. Capacity <sup>1</sup>	Total Shutdown Capacity <sup>1</sup>	Shutdown as a Percent of Total Capacity
Crude Oil Distillation	17,889.7	1,146.6	6.4
Vacuum Distillation	7,197.2	241.1	3.3
Catalytic Cracking	6,035.9	223.2	3.7
Catalytic Reforming	3,966.3	129.5	3.3
Catalytic Hydrocracking	892.1	4.2	0.5
Catalytic Hydrorefining and Hydrotreating	8,539.4	460.3	5.4

<sup>1</sup>Capacity as of January 1, 1982.

Note: Crude oil distillation capacity in thousand barrels per calendar day; all other types of capacity in thousand barrels per stream day.

**Figure 2. U.S. Refinery Capacity and Petroleum Products Supplied (Million Barrels per Day)**



Source: *Petroleum Supply Monthly* 1982; *Petroleum Supply Annual* 1981; *Petroleum Statement Annual* 1975-1979.

## Refinery Location

Almost half of the refineries that closed during 1982 were in the Gulf Coast region, which had 46 percent of the nation's crude oil distillation capacity at the beginning of 1982. The closings there accounted for 494 thousand barrels per day, 6 percent of the region's capacity and 43 percent of the total amount shutdown in 1982. However, at the end of 1982, the Gulf Coast had increased its share of the U.S. crude oil distillation capacity from 46 percent to 47 percent (see Table 3).

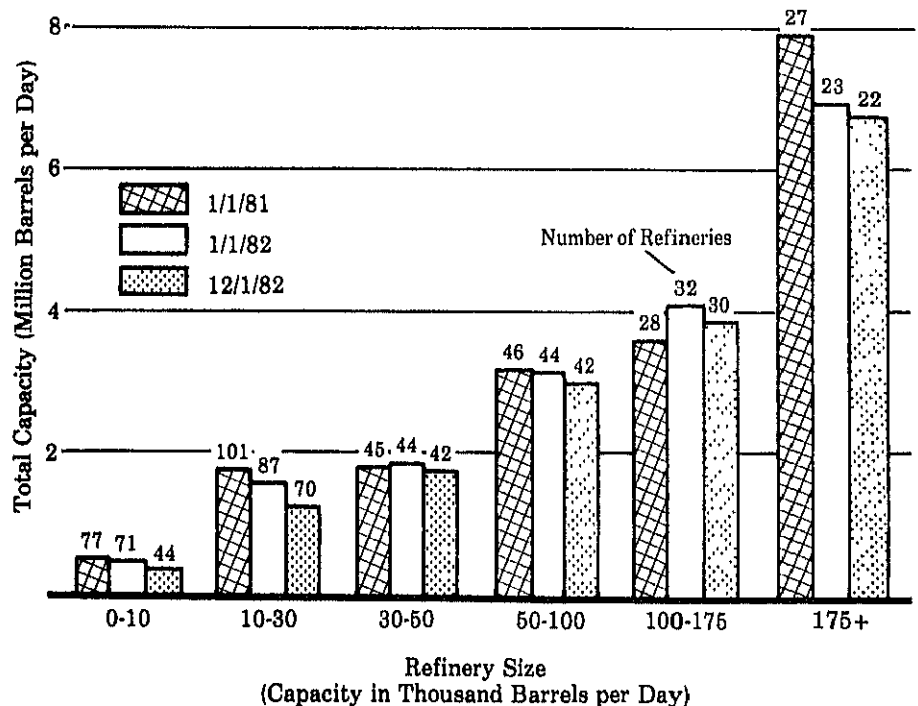
The Midwest, which had 23 percent of U.S. crude oil distillation capacity at the beginning of 1982, had 14 refineries shut down and lost 453 thousand barrels per day, 11 percent of the region's capacity and 40 percent of the total amount shutdown in 1982. This was the largest percentage loss of capacity for any region. During 1982, the Midwest region's share of U.S. distillation capacity dropped from 23 percent to 21 percent.

In the 3 remaining regions, East Coast, Rocky Mountain, and West Coast, the refinery shutdowns accounted for 94 thousand, 57 thousand, and 48 thousand barrels per day, respectively. Between January 1, 1982, and December 31, 1982, the East Coast's and the Rocky Mountain's shares of capacity remained about the same at about 10 percent and about 3.5 percent, respectively. During the same period, the West Coast's share of U.S. crude oil distillation capacity grew slightly from 17.5 percent to 18.6 percent.

## Conclusion

During 1982, 57 of the 301 refineries that were operable at the beginning of the year were shut down. These shutdown refineries had a crude oil distillation capacity of 1.1 million barrels per day, 6 percent of the distillation capacity on January 1, 1982. Also at these locations, 1.1 million barrels per day of downstream facilities were closed (4 percent of the nation's total). The shutdown refineries can be divided into two

Figure 3. U.S. Refinery Capacity by Refinery Size



Source: Forms EIA-177 (1981), EIA-87 (1982)



major age categories: a group of older refineries which had been in operation 25 years or more; and a group of newer refineries which had been in operation less than 5 years and which tended to be smaller and less complex than the average U.S. refinery. The net result of refin-

ery shutdowns and additions during 1982 was a shift in the shares of U.S. crude oil distillation capacity predominantly to the Gulf Coast, to a lesser extent to the West Coast, and away from the Midwest.

**Table 3. Refinery Capacity by Region**  
(Thousand Barrels per Calendar Day)

	East Coast (PADD 1)	Midwest (PADD 2)	Gulf Coast (PADD 3)	Rocky Mountain (PADD 4)	West Coast (PADD 5)	U.S. Total
Total Capacity (Jan 1, 1982)	1,825	4,035	8,271	635	3,124	17,890
1982 Shutdowns	94	453	494	57	48	1,147
1982 Net Additions	31	-23	162	11	83	264
Total Capacity (Dec. 1, 1982)	1,762	3,559	7,939	589	3,159	17,008

Totals may not equal sum of components due to independent rounding.

## U.S. Petroleum Imports and Exports

The major developments in U.S. trade during 1982 were the continued sharp decline of crude oil imports, the emergence of Mexico as the leading foreign supplier of petroleum to the United States, and the growth in petroleum product exports to the highest level ever. The decrease in imports and the shift in supply sources continue the recent trend toward greater U.S. oil supply security. Because domestic production has remained fairly constant, the drop in imports is associated with the decline in domestic demand.

### Imports

During 1982, gross U.S. imports (crude oil and petroleum products) averaged 5.0 million barrels per day, continuing the downward trend since 1979. Imports had peaked earlier in 1977 at an average of 8.8 million barrels per day (see Figure 4).<sup>1</sup> The 1982 imports level was 43 percent below the 1977 peak and 16 percent below the 1981 level.

Three major factors contributed to the declining U.S. dependence on petroleum imports:

- **Price-induced Conservation.** Real fuel price increases in 1979, 1980, and 1981, spurred conservation. The refiner acquisition cost of imported crude oil for 1981 averaged \$37.05 per barrel, approximately 2.5 times the 1977 price.<sup>2</sup> Although the refiner acquisition cost of crude oil dropped in 1982, new automobile efficiencies, better-insulated buildings, and other similar investments in conservation contributed to lower petroleum consumption during 1982.
- **Stock Withdrawals.** Withdrawals from petroleum inventories (excluding the Strategic Petroleum Reserve [SPR] inventories) averaged 337 thousand barrels per day. This is substantially greater than the 176-thousand-barrel-per-day

<sup>1</sup>Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109(83/02) (Washington, D.C.: February 1983), p. 19.

<sup>2</sup>Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(83/01) (Washington, D.C.: January 1982), p. 80.

drawdown (excluding SPR) during 1981.

- **Economic Activity.** The low level of economic activity contributed to the 5-percent decline in petroleum consumption (measured as products supplied for domestic use) during 1982.

Total petroleum imports peaked in 1977, declined in 1978, increased in 1979, and then declined each subsequent year (see Figure 4). While import quantities have declined since 1977 their values increased and attained a record level of \$79 billion dollars in 1980 (see Figure 5).<sup>3</sup> During 1982, both import quantities and their values declined. The divergence in quantities and values in 1979 and 1980 reflects the rapid rise in cost per barrel for petroleum imports. The refiner acquisition cost of imported crude oil averaged \$14.55 per barrel for the 1977-1978 period; then

the cost rose to \$21.67 per barrel in 1979 and continued to increase to a peak average of \$37.05 per barrel in 1981. Preliminary statistics indicate that the average price during 1982 was about \$3 per barrel lower.<sup>4</sup>

Crude oil imports averaged 3.5 million barrels per day in 1982, 48 percent below the 1977 average and 21 percent below the 1981 average. This decline occurred despite imports for the SPR which averaged 165 thousand barrels per day, compared with 21 thousand barrels per day during 1977.<sup>5</sup>

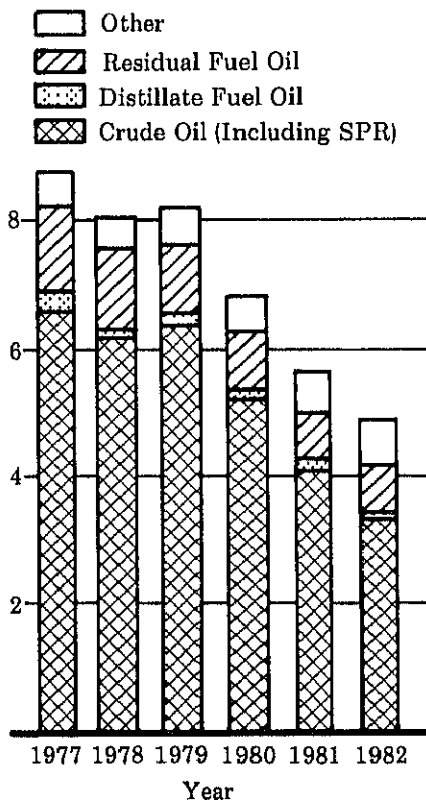
Petroleum product imports declined slightly during 1982. Residual fuel oil imports have declined consistently since

<sup>3</sup>Department of Commerce, Bureau of the Census, *Summary of U.S. Export and Import Merchandise Trade*, FT-900 (Washington, D.C.: December 1977-82).

<sup>4</sup>*Monthly Energy Review*, p. 80.

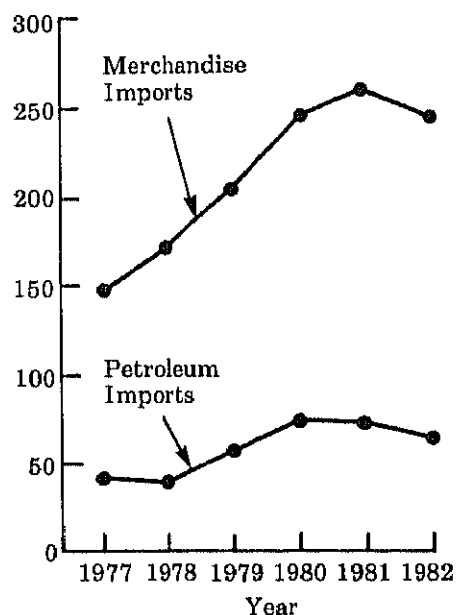
<sup>5</sup>*Petroleum Supply Monthly*, p. 22.

**Figure 4. Petroleum Imports**  
(Million Barrels per Day)



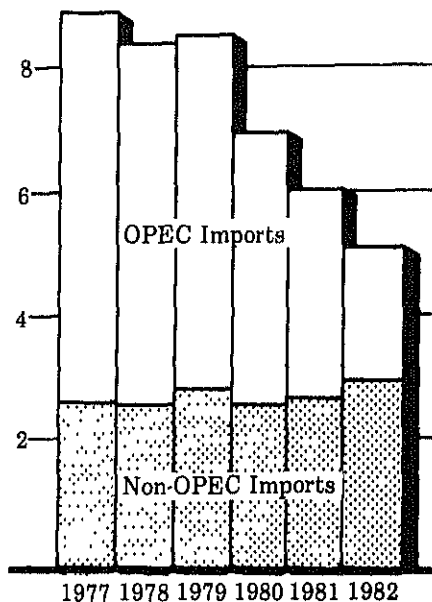
Source: *Petroleum Supply Monthly*, February 1983

**Figure 5. Value of Petroleum and Merchandise Imports,**  
(Billion Dollars)



Source: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," FT900.

**Figure 6. U.S. Imports from OPEC and Non-OPEC Sources**  
(Million Barrels per Day)



Source: *Petroleum Supply Monthly*, February 1983

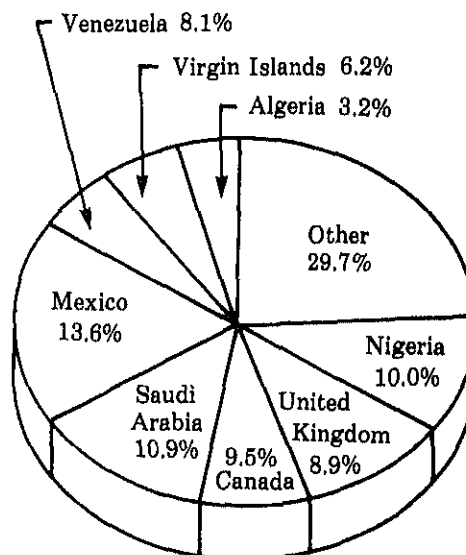
1976; they averaged 758 thousand barrels per day in 1982, 5 percent below the average for 1981 and 46 percent below the peak for 1976.<sup>6</sup> This decline is attributable mainly to the decreased demand for residual fuel oil because of fuel switching, especially in the electric-utility sector and reduced industrial activity. The industrial and electric utility sectors account for about two-thirds of residual fuel oil consumption.

Distillate fuel oil imports averaged 93 thousand barrels per day during 1982, 46 percent below the 1981 level and 63 percent below the 1977 level.<sup>7</sup> Distillate fuel oils are used primarily for diesel-engine fuel, space heating, and electric power generation. The economic recession contributed to the drop in distillate fuel oil imports.

### Declining Reliance on OPEC Imports

During the past 5 years, the relative importance of foreign sources as suppliers of U.S. imports has changed. Members of the Organization of Petroleum Exporting Countries (OPEC), Saudi Arabia in particular, have become less dominant as U.S. suppliers, while non-OPEC countries, especially Mexico and the United Kingdom, have become more important.

**Figure 7. Petroleum Imports by Source, 1982.**



Source: *Petroleum Supply Monthly*, February 1983

Through the mid-1970's, the volumes of U.S. imports from OPEC countries grew steadily to a peak average during 1977 of 6.2 million barrels per day, nearly 70 percent of the U.S. total. That year Saudi Arabia and Nigeria each exported more than 1 million barrels per day of petroleum to the United States, while Venezuela and Libya each exported about 700 thousand barrels per day to the United States.<sup>8</sup>

U.S. imports from OPEC countries have dropped off substantially since 1978. During 1982, OPEC supplied 2.1 million barrels per day, about 42 percent of the U.S. import total. Saudi Arabia and Nigeria each provided less than half of the amounts that they did in 1978. Other OPEC countries showed similar decreases. U.S. imports from Algeria, over 600 thousand barrels per day in 1978,

<sup>6</sup>*Petroleum Supply Monthly*, p. 32.

<sup>7</sup>*Petroleum Supply Monthly*, p. 27.

<sup>8</sup>*Petroleum Supply Monthly*, p. 37

were down to 161 thousand barrels per day in 1982, and imports from Venezuela were down to 408 thousand barrels per day. Petroleum imports from Iran, over 500 thousand barrels per day in 1978, were cut off in early 1980 and were resumed in June 1982 and averaged 35 thousand barrels per day in 1982.<sup>9</sup> Crude oil imports from Libya were eliminated by a U.S. embargo in the spring of 1982.

U.S. petroleum imports from non-OPEC countries have grown only slightly in volume since 1978, but they have come to represent a far larger share of the U.S. total. In 1978, non-OPEC countries supplied 2.6 million barrels per day, or about 30 percent of U.S. imports. That

year, U.S. imports from Canada, at 467 thousand barrels per day, were the largest from any non-OPEC country.<sup>10</sup> By 1982, petroleum imports from non-OPEC countries of 2.9 million barrels per day represented 58 percent of U.S. imports. During 1980, Mexico became the largest non-OPEC supplier of petroleum to the United States. By 1982, Mexico was exporting an average of 684 thousand barrels per day of petroleum

<sup>9</sup>*Petroleum Supply Monthly*, p. 37.

<sup>10</sup>Energy Information Administration, *Supply, Disposition, and Stocks of All Oils by Petroleum Administration for Defense Districts, and Imports of Petroleum, by County, Annual*, (Washington D.C.: 1977-1981); *Petroleum Supply Monthly*, p. 38.

**Table 4. Imports of Crude Oil and Petroleum Products by Country of Origin, 1982.**

(Thousand Barrels per Day)

	Crude Oil	Residual Fuel Oil	LPG and Ethane	Finished Motor Gasoline	Distillate Fuel Oil	Other Products	Total Imports
Mexico	644	22	17	(s)	1	1	684
Saudi Arabia	527	2	3	0	0	15	548
Nigeria	502	3	0	0	(s)	(s)	505
Canada	213	23	193	7	9	31	477
United Kingdom	436	4	1	3	0	6	451
Venezuela	154	203	2	4	5	40	408
Virgin Islands	0	122	0	59	52	82	315
Indonesia	223	8	4	7	3	(s)	245
Netherlands							
Antilles	0	139	0	5	1	28	173
Algeria	85	67	2	0	1	6	161
Other							
Countries	676	165	3	101	21	110	1,077
Total	3,460	758	225	186	93	319	5,041

Source: *Petroleum Supply Monthly* (March 1982 through February 1983), Table 21.

(s)=less than one half unit.

Totals may not equal sum of components due to independent rounding.

**Table 5. U.S. Exports of Crude Oil and Petroleum Products by Country of Destination, 1982**

(Thousand Barrels per Day)

	Crude Oil	Residual Fuel Oil	Petroleum Coke	Distillate Fuel Oil	LPG and Ethane	Other Products	Total
Virgin Islands	113	2	(s)	1	(s)	(s)	116
Puerto Rico	72	14	1	(s)	1	7	95
Canada	36	11	9	(s)	24	5	85
Netherlands	0	47	22	9	5	2	85
Japan	0	15	35	15	(s)	3	68
Mexico	0	1	1	12	20	19	53
Italy	0	8	14	2	3	5	32
Korea							
Republic of	0	23	1	4	(s)	(s)	28
Spain	0	2	18	1	(s)	3	24
France	0	3	10	4	3	4	24
Other Countries	15	83	45	26	9	27	206
Total	236	209	156	74	65	75	815

Source: *Petroleum Supply Monthly* (March 1982 through February 1983), Table 23.

(s)=less than one half unit.

Totals may not equal sum of components due to independent rounding.

to the United States, more than any other country. Canada, with 477 thousand barrels per day, and the United Kingdom with 451 thousand barrels per day, were the second and third largest non-OPEC suppliers.<sup>11</sup>

Price was a major reason for the U.S. shift to petroleum imports from non-OPEC sources. In 1978, the landed costs of crude oil imports from most major foreign suppliers were within one dollar of each other, with Saudi Arabian crude oil at \$13.92, Nigerian crude oil at \$14.86, Mexican crude oil at \$13.54, and Canadian crude oil at \$14.50 per barrel. By 1982, the price differences between OPEC and non-OPEC crude oils were much greater. Non-OPEC crude oils were consistently less expensive than the crude oils from OPEC countries. In October 1982, the landed costs of Saudi Arabian and Nigerian crude oils were, respectively, \$35.21 per barrel and \$36.09 per barrel; while the landed costs of crude oils from Canada, Mexico, and

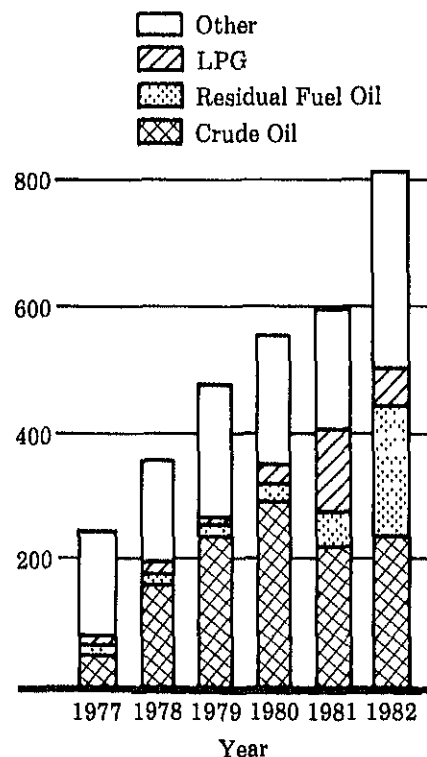
the United Kingdom were \$26.94, \$28.32, and \$34.24 per barrel, respectively.<sup>12</sup>

## Exports

During 1982, total petroleum exports averaged 815 thousand barrels per day. Refined product exports made up about 70 percent of this total, and crude oil exports made up the remaining 30 percent. U.S. petroleum exports have increased sharply over the past 5 years, from 243 thousand barrels per day during 1977, to 544 thousand barrels per day in 1980, and to the 1982 level of 815 thousand barrels a day, the highest petroleum export level ever.<sup>13</sup> These increases were primarily in exports of petroleum products. A major reason for the 1982 growth in product exports was the relaxation of product export restrictions in 1981. The total value of the petroleum exported by the United States during 1982 was \$5.9 billion.<sup>14</sup>

Exports of petroleum products averaged 579 thousand barrels per day during 1982, 124 percent above the 1980 average, and 200 percent above the 1977 average. Residual fuel oil, petroleum coke, distillate fuel oil, and liquefied petroleum gases (LPG) were the major products exported by the United States. Western Europe, Japan, Canada, and Mexico were the major recipients of U.S. exports (see Table 5). During 1982 U.S. exports of residual fuel oil averaged 209 thousand barrels per day; 22 percent of these exports went to the Netherlands. Petroleum coke exports averaged 156 thousand barrels per day during 1982; 22 percent of these exports went to Japan. Distillate fuel oil exports during 1982 averaged 74 thousand barrels per day; 20 percent of these exports went to Japan and another 16 percent went to Mexico. LPG exports during 1982 averaged 65 thousand barrels per day; 37 percent of these exports went to Canada and another 31 percent went to Mexico.<sup>15</sup> These four products together

**Figure 8. Petroleum Exports**  
(Thousand Barrels per Day)



Source: *Petroleum Supply Monthly*, February 1983

<sup>11</sup>*Petroleum Supply Monthly*, p. 38.

<sup>12</sup>*Monthly Energy Review*, p. 83.

<sup>13</sup>*Petroleum Supply Monthly*, p. 19.

<sup>14</sup>Bureau of the Census, *Highlights of U.S. Import and Export Trade*, Annual, FT-990 (Washington, D.C.: 1982), Table E-2.

<sup>15</sup>*Petroleum Supply Monthly*, Table 23.

made up more than 85 percent of the 1982 petroleum product export total.

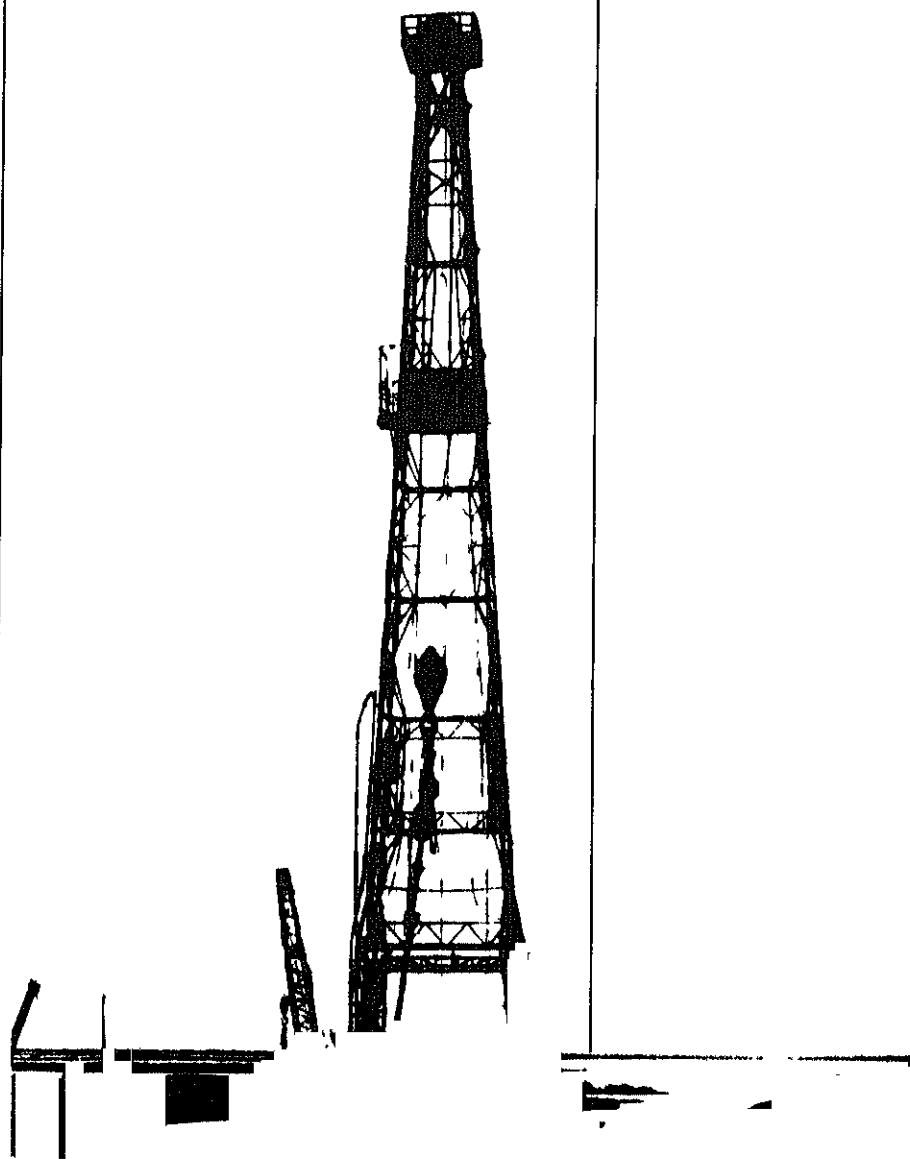
During 1982, crude oil exports averaged 236 thousand barrels per day, just 8 thousand barrels per day more than was exported during 1981. The 1982 crude oil exports consisted of 200 thousand barrels per day shipped to U.S. territories (including Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone) and 36 thousand barrels exchanged with Canada on a barrel-for-barrel basis for crude oil of comparable

quality. Although exports are actually prohibited by law, the tracking system for imports and exports counts these shipments and exchanges as exports.

## Outlook

The downward trend in petroleum imports is not expected to continue. However, future import levels will depend to a large extent on changes in economic activity, crude oil availability, and prices.







# Crude Oil<sup>1</sup> and Petroleum Products Overview

		Field Production			Stock Withdrawal <sup>2</sup>			Ending Stocks <sup>3</sup>
		Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oil <sup>5</sup> and Petroleum Products
								Millions of Barrels
Thousand Barrels per Day								
1973	AVERAGE	10,975	9,208	1,738	11	-146	17,308	1,008
1974	AVERAGE	10,498	8,774	1,688	-62	-117	16,653	1,074
1975	AVERAGE	10,045	8,375	1,633	-17	-145	16,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,461	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-378	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,847	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	1,392
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	16,989	1,389
	March	10,272	8,613	1,624	-632	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,160	8,501	1,593	-391	-374	15,353	1,438
	June	10,287	8,629	1,594	-135	406	16,095	1,430
	July	10,098	8,500	1,548	-360	91	15,682	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,476
	October	10,225	8,563	1,598	-760	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,590	-170	745	16,596	1,484
	AVERAGE	10,230	8,572	1,609	-290	130	16,058	
1982	January	10,257	8,669	1,548	-236	1,129	15,890	1,461
	February	10,261	8,690	1,524	-216	1,268	15,941	1,431
	March	10,212	8,597	1,570	-65	1,049	15,560	1,401
	April	10,296	8,652	1,588	107	1,594	16,048	1,350
	May	10,223	8,660	1,520	49	-34	14,845	1,349
	June	10,242	8,681	1,505	86	-515	14,931	1,362
	July	10,228	8,649	1,521	-155	-865	14,771	1,394
	August	10,301	8,701	1,543	-440	4	14,838	1,407
	September	10,306	8,733	1,513	252	-489	14,921	1,415
	October	10,283	8,676	1,540	-564	-55	14,820	1,434
	November	10,377	8,690	1,634	-357	-357	15,031	1,455
	December*	10,348	8,660	R 1,638	R 143	R 703	R 15,508	R 1,429
	AVERAGE	10,278	8,671	1,554	-117	280	15,253	
1983	January**	NA	8,634	NA	-293	1,137	15,318	1,414

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Ending stocks for 1973-1980 are totals as of December 31.

<sup>4</sup> Includes crude oil, natural gas plant production, other hydrocarbons and alcohol.

<sup>5</sup> Includes stocks located in the Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data

\* See Explanatory Note 5.1.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil<sup>1</sup> and Petroleum Products Overview ( continued )

		Imports <sup>2</sup>			Exports <sup>3</sup>			Net <sup>5</sup> Imports
		Total	Crude Oil <sup>4</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	
Thousand Barrels per Day								
1973	AVERAGE	6,256	3,244	3,012	231	2	229	6,025
1974	AVERAGE	6,112	3,477	2,635	221	3	218	5,892
1975	AVERAGE	6,056	4,105	1,951	209	6	204	5,846
1976	AVERAGE	7,313	5,287	2,026	223	8	215	7,090
1977	AVERAGE	8,807	6,615	2,193	243	50	193	8,565
1978	AVERAGE	8,363	6,356	2,008	362	158	204	8,002
1979	AVERAGE	8,456	6,519	1,937	472	235	237	7,984
1980	AVERAGE	6,909	5,263	1,646	544	287	258	6,365
1981	January	6,827	4,932	1,895	558	339	219	6,270
	February	6,772	4,873	1,899	569	198	371	6,203
	March	6,028	4,521	1,507	586	210	376	5,442
	April	5,668	4,338	1,330	570	198	372	5,098
	May	5,775	4,287	1,489	595	312	283	5,180
	June	5,435	4,061	1,375	420	123	297	5,015
	July	5,816	4,296	1,521	571	257	314	5,245
	August	5,767	4,179	1,588	644	204	440	5,123
	September	6,365	4,740	1,624	519	194	325	5,845
	October	5,959	4,380	1,579	738	226	512	5,221
	November	5,741	4,046	1,695	701	278	423	5,041
	December	5,843	4,137	1,706	656	189	467	5,167
		AVERAGE	5,996	4,396	1,599	595	228	367
1982	January	5,232	3,648	1,585	829	238	591	4,404
	February	4,691	2,949	1,742	804	304	499	3,887
	March	4,461	2,856	1,606	882	321	561	3,579
	April	4,286	2,813	1,474	786	174	611	3,501
	May	4,784	3,314	1,471	803	262	542	3,981
	June	5,227	3,782	1,445	703	94	609	4,524
	July	5,763	4,245	1,518	741	229	512	5,022
	August	5,156	3,820	1,336	858	304	554	4,298
	September	5,359	3,603	1,757	791	184	606	4,569
	October	5,230	3,636	1,594	932	270	662	4,298
	November	5,726	3,863	1,864	786	262	524	4,940
	December*	R 4,562	R 2,956	R 1,606	860	193	667	3,702
		AVERAGE	5,041	3,461	1,581	815	236	579
1983	January**	4,304	3,019	1,285	NA	NA	NA	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes shipments from United States possessions and territories.

<sup>3</sup> Includes shipments to United States possessions and territories.

<sup>4</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>5</sup> Net Imports = Imports minus Exports.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

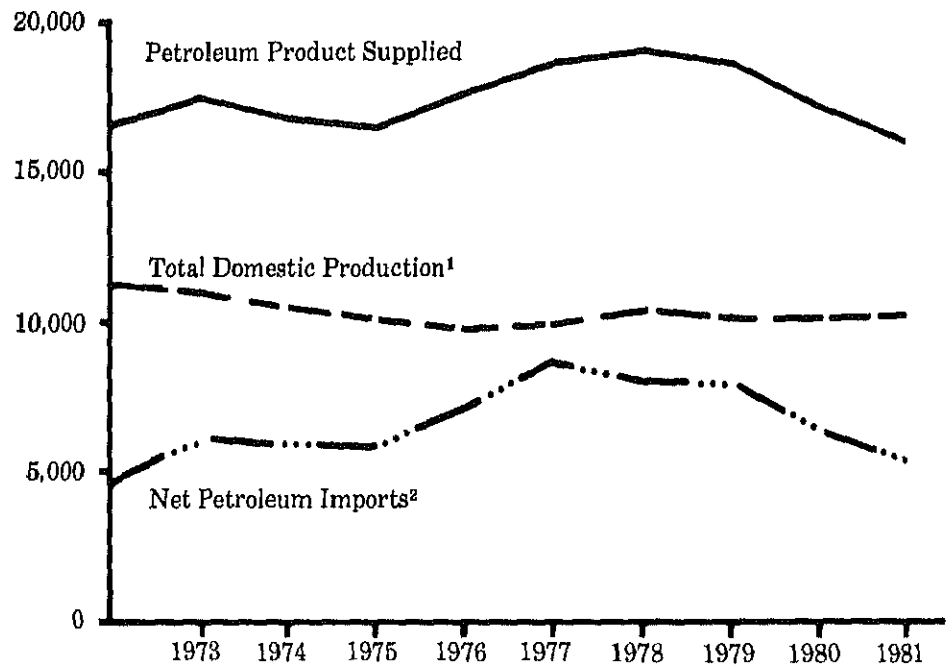
\* See Explanatory Note 5.1.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

## Petroleum Overview, Annual (Thousand Barrels per Day)



<sup>1</sup>Includes crude oil and natural gas plant production.

<sup>2</sup>Includes SPR imports.

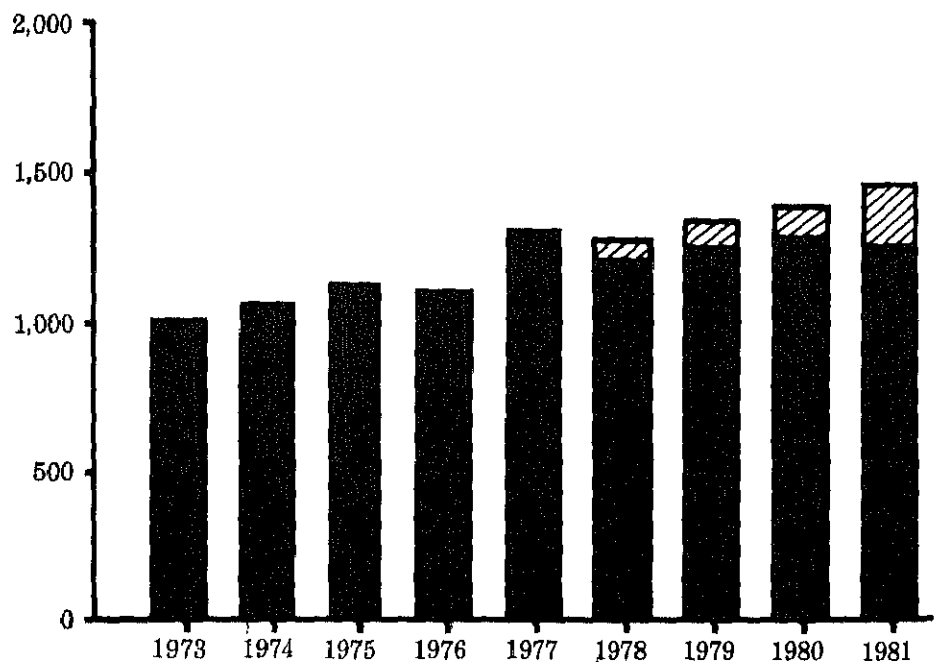
Source table: "Crude Oil and Petroleum Products Overview."

## Crude Oil and Petroleum Products Ending Stocks, Annual (Millions of Barrels)

### Legend

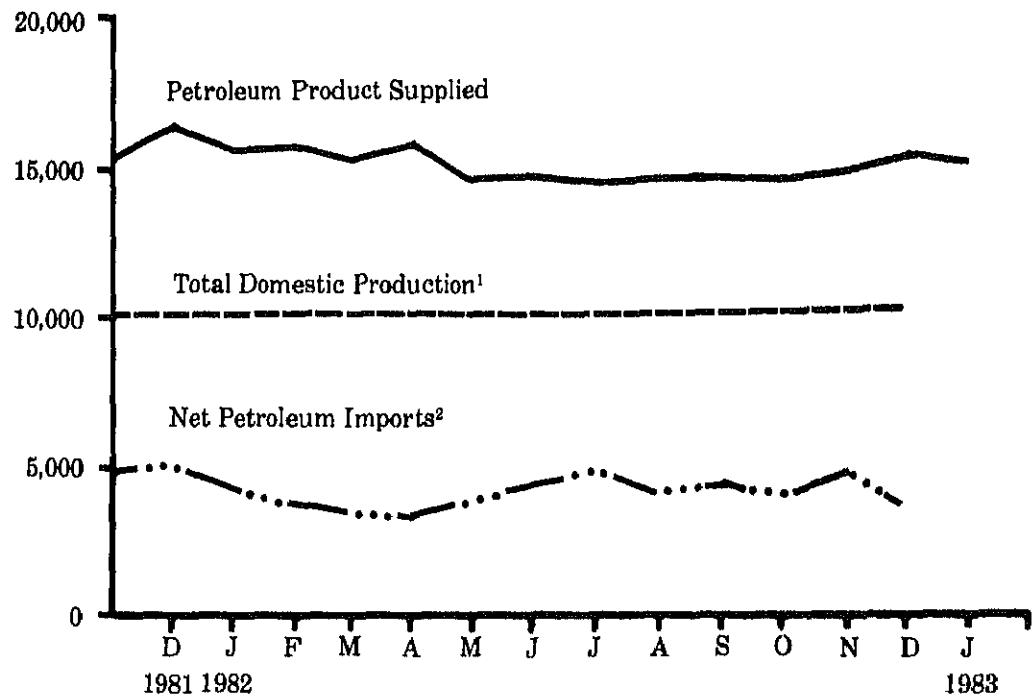
▨ SPR Crude Oil

■ Crude Oil and Petroleum Products, Excluding SPR



Source tables: "Crude Oil and Petroleum Products Overview" and "Crude Oil Supply and Disposition."

## Petroleum Overview, Monthly (Thousand Barrels per Day)



Includes crude oil and natural gas plant production.

Includes SPR imports.

Source table: "Crude Oil and Petroleum Products Overview."

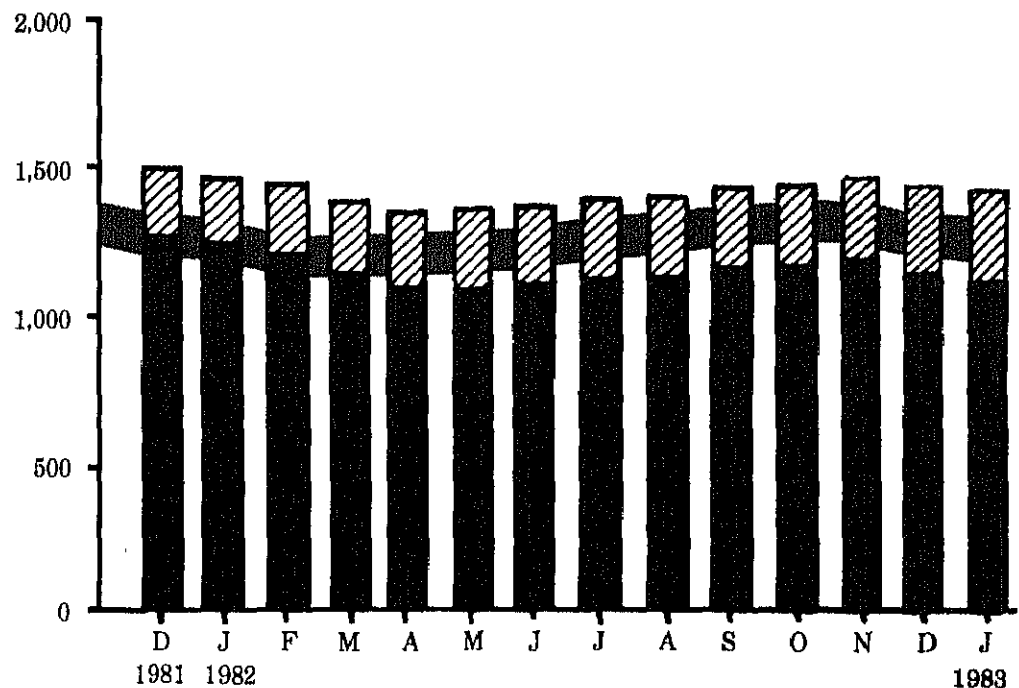
## Crude Oil and Petroleum Product Ending Stocks, Monthly (Millions of Barrels)

Legend

▨ SPR Crude Oil

■ Crude Oil and Petroleum Products, Excluding SPR

▤ Average Stock Range<sup>1</sup>



Average stock range (excluding SPR) based on 3 years of data. See explanatory Note 2.5.

Source tables: "Crude Oil and Petroleum Products Overview" and "Crude Oil Supply and Disposition."

# Crude Oil<sup>1</sup> Supply and Disposition

		Supply						
		Field Production		Imports <sup>2</sup>			Stock Withdrawal <sup>3</sup>	
		Total Domestic	Alaskan	Total	SPR <sup>4</sup>	Other	SPR <sup>4</sup>	Other
		/ Thousand Barrels per Day						
1973	AVERAGE	9,208	198	3,244		3,244		11
1974	AVERAGE	8,774	193	3,477		3,477		-62
1975	AVERAGE	8,375	191	4,105		4,105		-17
1976	AVERAGE	8,132	173	5,287		5,287		-39
1977	AVERAGE	8,245	464	6,615	21	6,594	-20	-150
1978	AVERAGE	8,707	1,229	6,356	162	6,195	-163	84
1979	AVERAGE	8,552	1,401	6,519	67	6,452	-67	-81
1980	AVERAGE	8,597	1,617	5,263	44	5,219	-45	-52
1981	January	8,540	1,606	4,932	106	4,826	-151	201
	February	8,604	1,619	4,873	80	4,793	-127	-150
	March	8,613	1,618	4,521	140	4,382	-155	-477
	April	8,557	1,608	4,338	272	4,066	-444	-151
	May	8,501	1,580	4,287	386	3,901	-513	122
	June	8,629	1,832	4,061	318	3,743	-434	299
	July	8,500	1,805	4,296	175	4,121	-324	-36
	August	8,583	1,602	4,179	257	3,922	-372	769
	September	8,604	1,607	4,740	435	4,305	-436	201
	October	8,563	1,596	4,380	453	3,927	-501	-259
	November	8,586	1,614	4,046	271	3,774	-269	-66
	December	8,585	1,623	4,137	165	3,971	-252	82
	AVERAGE	8,572	1,609	4,396	256	4,141	-336	46
1982	January	8,669	1,712	3,648	170	3,478	-159	-77
	February	8,690	1,715	2,949	169	2,790	-213	-3
	March	8,597	1,702	2,856	185	2,671	-235	170
	April	8,652	1,687	2,813	190	2,623	-233	341
	May	8,660	1,725	3,314	204	3,110	-176	225
	June	8,681	1,675	3,782	105	3,678	-105	191
	July	8,649	1,715	4,245	97	4,147	-97	-58
	August	8,701	1,699	3,820	208	3,611	-208	-233
	September	8,733	1,707	3,603	139	3,463	-143	395
	October	8,676	1,677	3,636	216	3,420	-216	-348
	November	8,690	1,667	3,863	180	3,683	-179	-177
	December*	8,660	1,663	R 2,956	R 124	R 2,832	R -125	R 267
	AVERAGE	8,671	1,695	3,461	165	3,296	-174	57
1983	January**	8,634	1,698	3,019	189	2,830	-206	-87

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes shipments from United States possessions and territories.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 5.2.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

**Crude Oil<sup>1</sup> Supply and Disposition ( continued )**

		Supply (Continued)		Disposition		Ending Stocks <sup>2</sup>		
		Unac- counted for Crude Oil	Crude Used Directly and Losses	Refinery Inputs	Exports <sup>3</sup>	Total Crude Oil	SPR <sup>4</sup>	Other Primary
		Thousand Barrels per Day				Millions of Barrels		
1973	AVERAGE	3	-32	12,431	2	242		242
1974	AVERAGE	-25	-28	12,133	3	265		265
1975	AVERAGE	17	-30	12,442	6	271		271
1976	AVERAGE	77	-33	13,416	8	285		285
1977	AVERAGE	-6	-30	14,602	50	348	7	340
1978	AVERAGE	-57	-30	14,739	158	376	67	309
1979	AVERAGE	-11	-29	14,648	235	430	91	339
1980	AVERAGE	34	-28	13,481	287	466	108	358
1981	January	113	-49	13,247	339	486	112	374
	February	-41	-58	12,902	198	494	116	378
	March	154	-63	12,383	210	514	121	393
	April	51	-62	12,091	198	532	134	397
	May	286	-62	12,309	312	544	150	394
	June	49	-65	12,415	123	548	163	385
	July	147	-65	12,261	257	559	173	386
	August	16	-63	12,908	204	547	185	362
	September	-295	-65	12,505	194	555	199	356
	October	166	-66	12,057	226	579	215	364
	November	279	-68	12,240	278	589	223	366
	December	52	-67	12,349	189	594	230	363
	AVERAGE	83	-63	12,470	228			
1982	January	-138	-66	11,638	238	606	235	371
	February	199	-66	11,252	304	612	241	371
	March	278	-68	11,277	321	614	249	366
	April	56	-68	11,386	174	611	256	365
	May	105	-65	11,801	262	609	261	348
	June	110	-67	12,498	94	607	264	343
	July	1	-63	12,447	229	612	267	345
	August	140	-59	11,858	304	625	274	352
	September	-218	-59	12,126	184	618	278	340
	October	324	-53	11,750	270	635	285	351
	November	-141	-52	11,741	262	646	290	356
	December*	2	-54	R 11,514	193	R 642	R 294	R 348
	AVERAGE	60	-62	11,776	236			
1983	January**	NA	NA	11,287	NA	656	300	356

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Ending stocks for 1973-1980 are totals as of December 31.

<sup>3</sup> Includes shipments to United States possessions and territories.

<sup>4</sup> Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

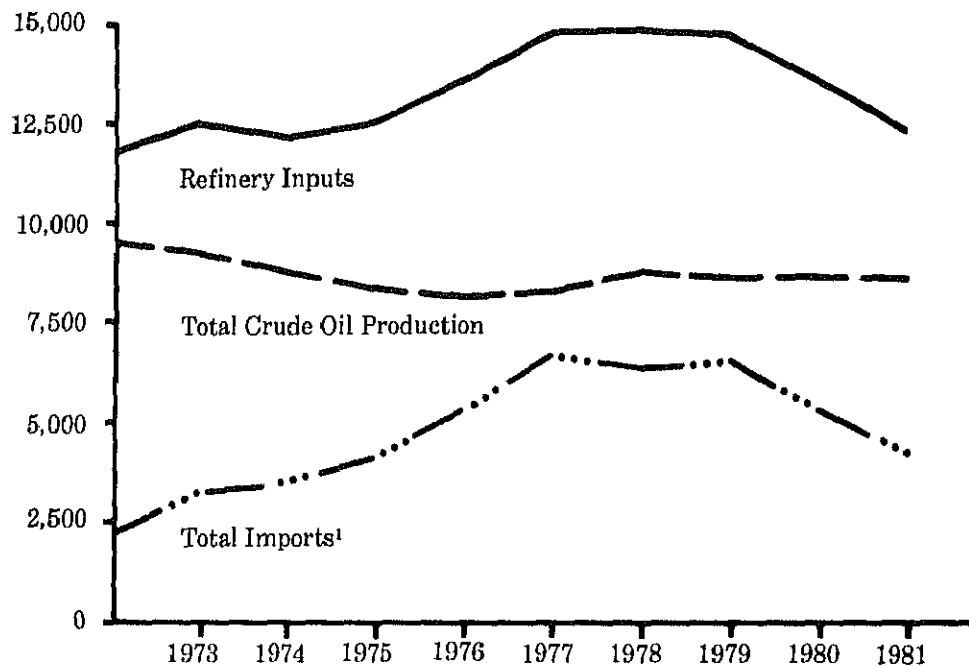
\* See Explanatory Note 5.2.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.



## Crude Oil Supply and Disposition, Annual (Thousand Barrels per Day)

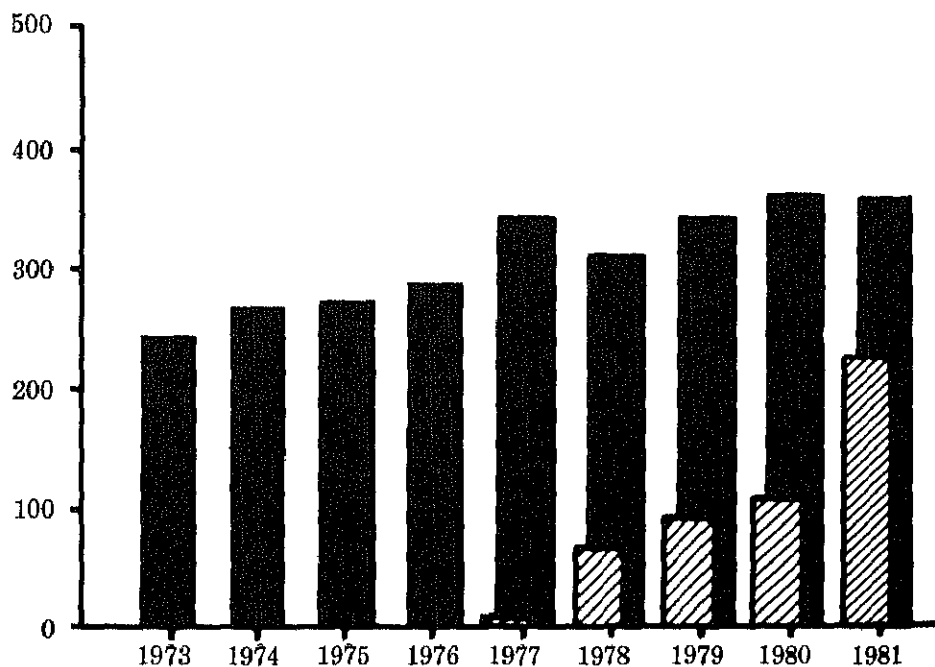


¹Includes SPR imports.

Source table: "Crude Oil Supply and Disposition."

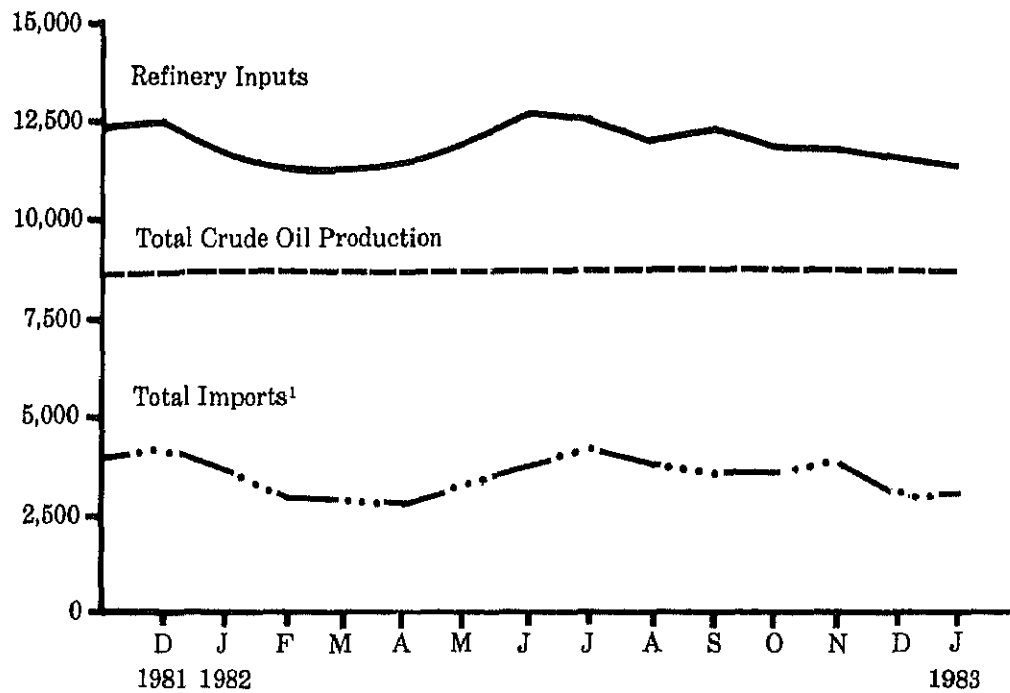
## Crude Oil Ending Stocks, Annual (Millions of Barrels)

**Legend**  
 SPR  
 Other Primary



Source table: "Crude Oil Supply and Disposition."

# Crude Oil Supply and Disposition, Monthly (Thousand Barrels per Day)

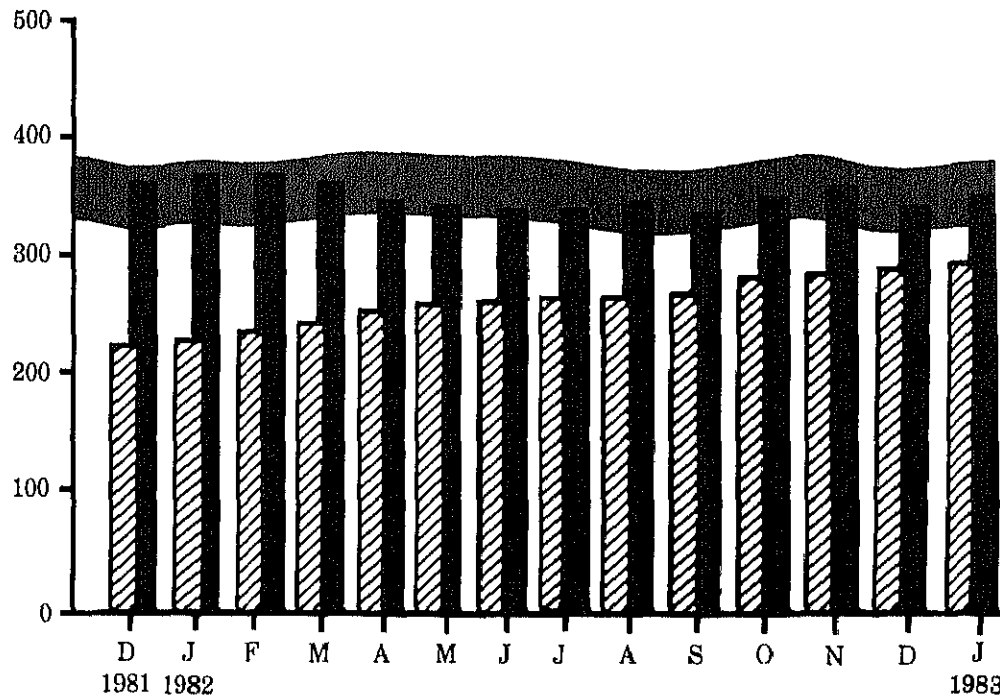


¹Includes SPR imports.

Source table: "Crude Oil Supply and Disposition."

## Crude Oil Ending Stocks, Monthly (Millions of Barrels)

**Legend**  
 SPR  
 Other Primary  
 Average Stock Range¹



¹Average stock range (excluding SPR) based on 3 years of data. See Explanatory Note 2.5.

Source table: "Crude Oil Supply and Disposition."



# Finished Motor Gasoline Supply and Disposition

		Supply			Disposition				Ending Stocks	
		Total Production	Imports <sup>1</sup>	Stock With- drawal <sup>1 2</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>3</sup>	Finished Motor Gasoline
						Total	Unleaded <sup>4</sup>	Unleaded		
Thousand Barrels per Day								Percent of Total	Millions of Barrels	
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209	
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	218	
1975	AVERAGE	6,520	184	-28	2	6,675	NA	NA	235	
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231	
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	258	
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	238	
1979	AVERAGE	6,852	181	2	( <sup>5</sup> )	7,034	2,798	39.8	237	
1980	AVERAGE	6,506	140	-66	1	6,579	3,067	46.6	261	
1981	January	6,715	138	-421	( <sup>5</sup> )	6,431	3,141	48.8	276	227
	February	6,308	111	-118	1	6,301	3,095	49.1	284	230
	March	6,213	171	-81	( <sup>5</sup> )	6,303	3,097	49.1	285	232
	April	6,114	186	303	( <sup>5</sup> )	6,602	3,284	49.7	272	223
	May	6,122	150	344	1	6,615	3,115	47.1	259	213
	June	6,220	186	622	1	7,028	3,419	48.6	242	194
	July	6,405	151	268	( <sup>5</sup> )	6,823	3,424	50.2	228	186
	August	6,611	124	-95	3	6,637	3,344	50.4	233	189
	September	6,564	169	-70	2	6,662	3,338	50.1	237	191
	October	6,426	147	7	3	6,578	3,257	49.5	236	190
	November	6,564	148	-338	1	6,373	3,198	50.2	248	201
	December	6,586	197	-91	11	6,681	3,444	51.5	253	203
	AVERAGE		6,405	157	28	2	6,588	3,264	49.5	
1982	January	6,181	114	-358	18	5,920	3,033	51.2	262	214
	February	5,917	133	28	8	6,070	3,145	51.8	262	213
	March	6,004	183	469	44	6,612	3,396	51.4	248	199
	April	6,104	177	641	33	6,890	3,494	50.7	223	180
	May	6,322	163	188	23	6,650	3,415	51.3	215	174
	June	6,767	195	-136	14	6,812	3,561	52.3	220	178
	July	6,788	200	-165	24	6,799	3,574	52.6	226	183
	August	6,447	284	-60	16	6,655	3,520	52.9	226	185
	September	6,530	215	-217	22	6,507	3,385	52.0	234	191
	October	6,253	177	-25	15	6,391	3,360	52.6	234	192
	November	6,273	206	91	11	6,559	3,448	52.6	230	189
	December*	R 6,540	R 178	-164	7	R 6,548	3,486	53.2	R 235	R 194
	AVERAGE		6,347	186	24	20	6,537	3,403	52.1	
1983	January**	6,050	156	NA	NA	5,963	NA	NA	243	201

<sup>1</sup> Beginning in 1981 excludes blending components.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Includes motor gasoline blending components. Ending stocks for 1973-1980 are totals as of December 31.

<sup>4</sup> Includes gasohol.

Totals may not equal sum of components due to independent rounding.

(<sup>5</sup>) = Less than 500 barrels. NA = Not available. R = Revised data.

\* See Explanatory Note 5.3.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Notes: Beginning in January 1981, survey forms were modified. See Explanatory Note 4 on Changes for the effects on motor gasoline statistics.

Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly	Exports	Product Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	2,822	392	-115	2	9	3,092	196
1974	AVERAGE	2,669	289	-9	2	2	2,948	200
1975	AVERAGE	2,654	155	40	2	1	2,851	209
1976	AVERAGE	2,924	146	62	1	1	3,133	186
1977	AVERAGE	3,278	250	-176	1	1	3,352	250
1978	AVERAGE	3,167	173	93	1	3	3,432	216
1979	AVERAGE	3,153	193	-34	1	3	3,311	229
1980	AVERAGE	2,662	142	64	1	3	2,866	205
1981	January	2,989	273	836	11	( <sup>g</sup> )	4,109	179
	February	2,809	325	246	11	17	3,373	173
	March	2,484	147	264	9	( <sup>g</sup> )	2,904	164
	April	2,418	116	-9	10	3	2,532	165
	May	2,454	179	-232	10	( <sup>g</sup> )	2,411	172
	June	2,501	225	-270	9	( <sup>g</sup> )	2,464	180
	July	2,395	179	-204	10	2	2,378	186
	August	2,656	174	-450	8	( <sup>g</sup> )	2,388	200
	September	2,610	129	-235	10	1	2,513	207
	October	2,485	119	197	9	5	2,803	201
	November	2,716	124	36	11	6	2,880	200
	December	2,856	95	277	11	26	3,212	192
	AVERAGE	2,613	173	38	10	5	2,829	
1982	January	2,615	96	780	10	90	3,410	166
	February	2,447	130	689	11	90	3,187	147
	March	2,294	48	612	10	84	2,881	128
	April	2,357	59	631	13	64	2,996	109
	May	2,618	74	-184	10	75	2,444	114
	June	2,731	100	-335	10	55	2,450	125
	July	2,734	124	-761	11	24	2,084	148
	August	2,526	79	-346	10	40	2,228	159
	September	2,658	59	-77	12	139	2,514	161
	October	2,837	97	-290	8	66	2,586	170
	November	2,863	141	-514	8	24	2,475	186
	December*	R 2,655	R 109	R 226	10	143	R 2,856	R 179
	AVERAGE	2,612	93	32	10	74	2,672	
1983	January**	2,375	63	669	NA	NA	3,056	160

<sup>1</sup> Ending stocks for 1973 - 1980 are totals as of December 31.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

Totals may not equal sum of components due to independent rounding.

(<sup>g</sup>) = Less than 500 barrels per day. NA = Not available. R = Revised data.

\* See Explanatory Note 5.4.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Note: Beginning in January 1981, survey forms were modified. See Explanatory Note 4 on Changes for the effects on Distillate Fuel Oil statistics.

Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

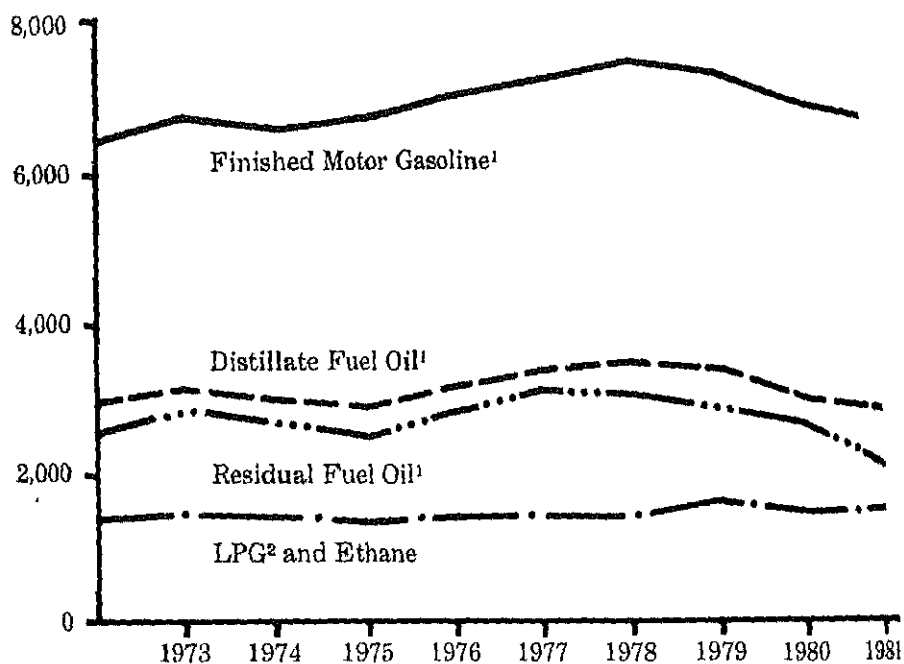
Sources: See "Sources" at the end of this section.

## Products Supplied, Annual (Thousand Barrels per Day)

<sup>1</sup>Figures for 1979 and 1980 recast to account for data system changes in 1981. See Explanatory Note 4.

<sup>2</sup>Liquefied Petroleum Gases.

Source tables: "Finished Motor Gasoline Supply and Disposition," "Distillate Fuel Oil Supply and Disposition," "Residual Fuel Oil Supply and Disposition," "Liquefied Petroleum Gases and Ethane Supply and Disposition."



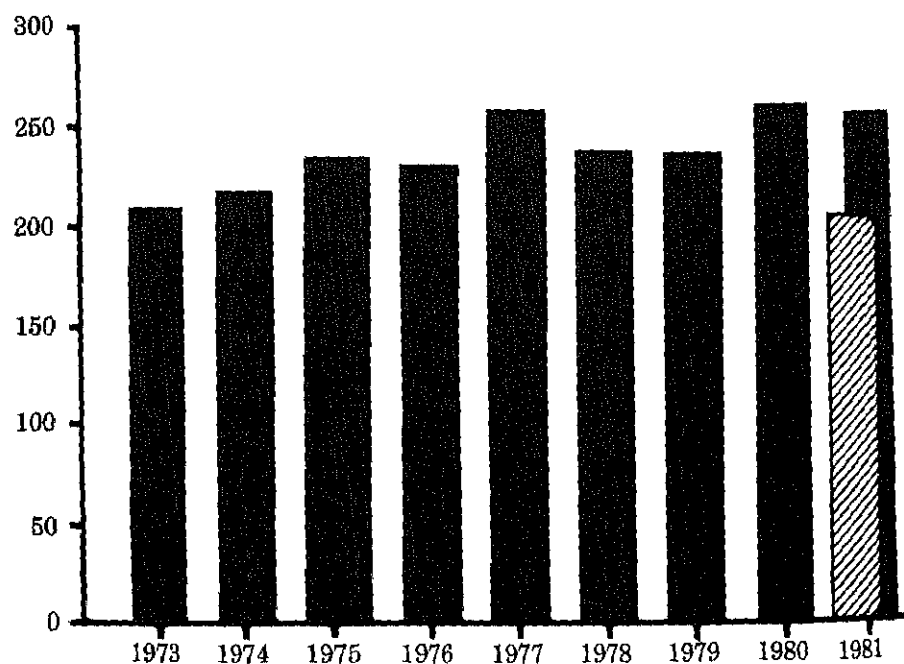
## Motor Gasoline<sup>1</sup> Ending Stocks, Annual (Millions of Barrels)

### Legend

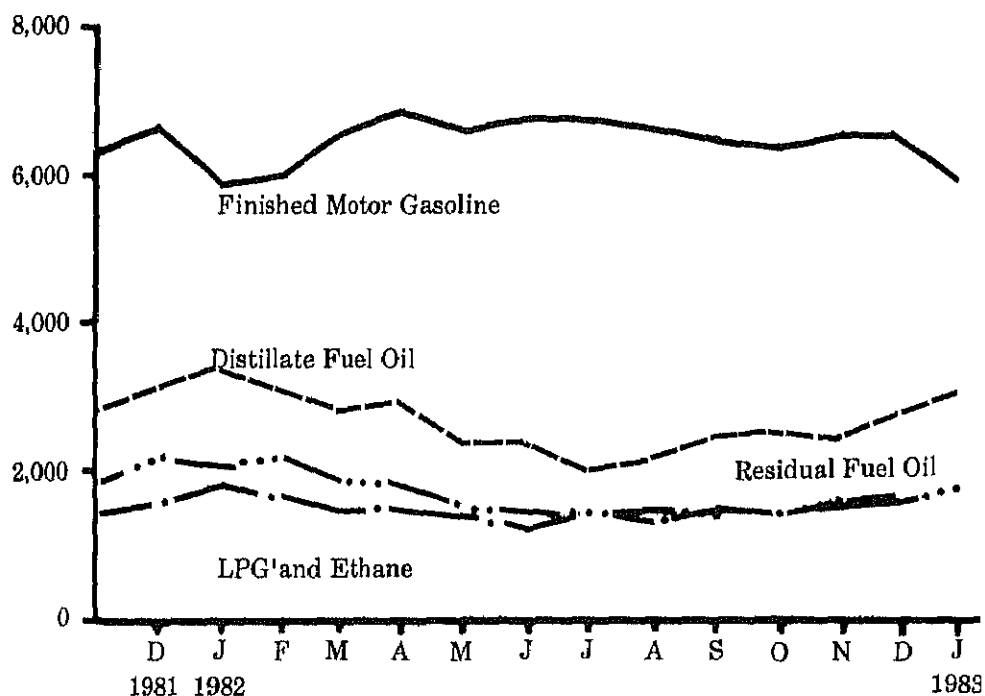
- Total
- ▨ Finished

<sup>1</sup>Includes finished motor gasoline blending components.

Source table: "Finished Motor Gasoline Supply and Disposition."



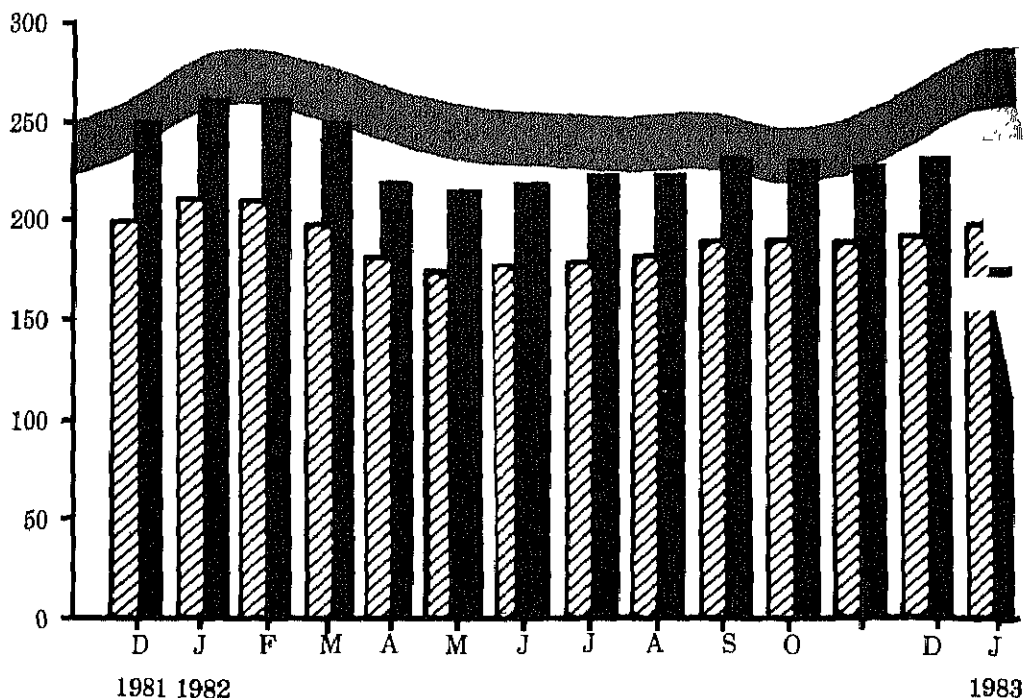
## Products Supplied, Monthly (Thousand Barrels per Day)



Liquefied Petroleum Gases.

Source tables: "Finished Motor Gasoline Supply and Disposition," "Distillate Fuel Oil Supply and Disposition," "Residual Fuel Oil Supply and Disposition," "Liquefied Petroleum Gases and Ethane Supply and Disposition."

## Motor Gasoline Ending Stocks, Monthly (Millions of Barrels)



Legend

■ Total Motor Gasoline<sup>1</sup>

▨ Finished Motor Gasoline

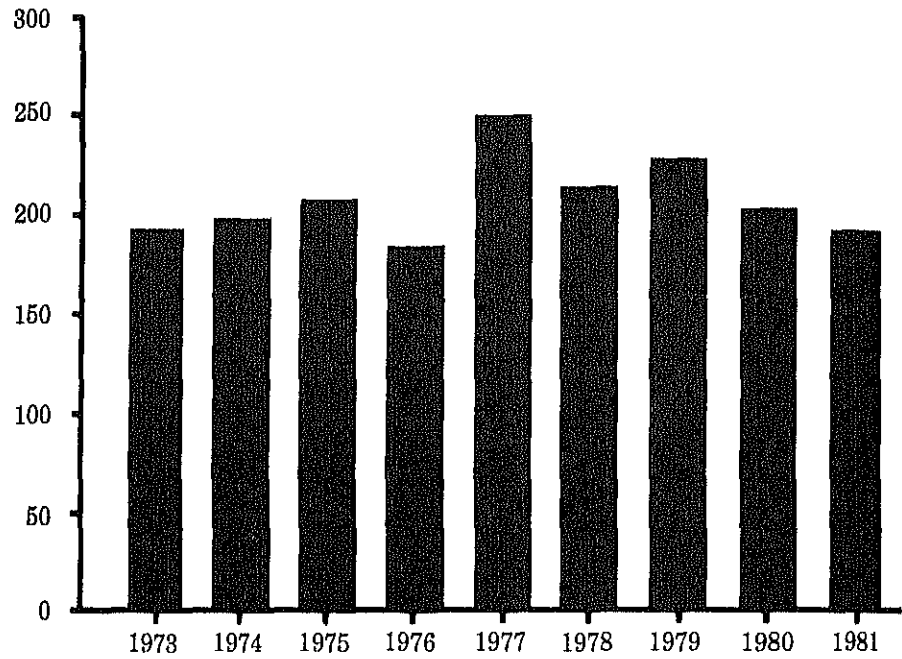
■ Average Stock Range<sup>2</sup>

<sup>1</sup>Includes finished motor gasoline and blending components.

<sup>2</sup>Average stock range for total motor gasoline based on 3 years of data. See explanatory Note 2.5.

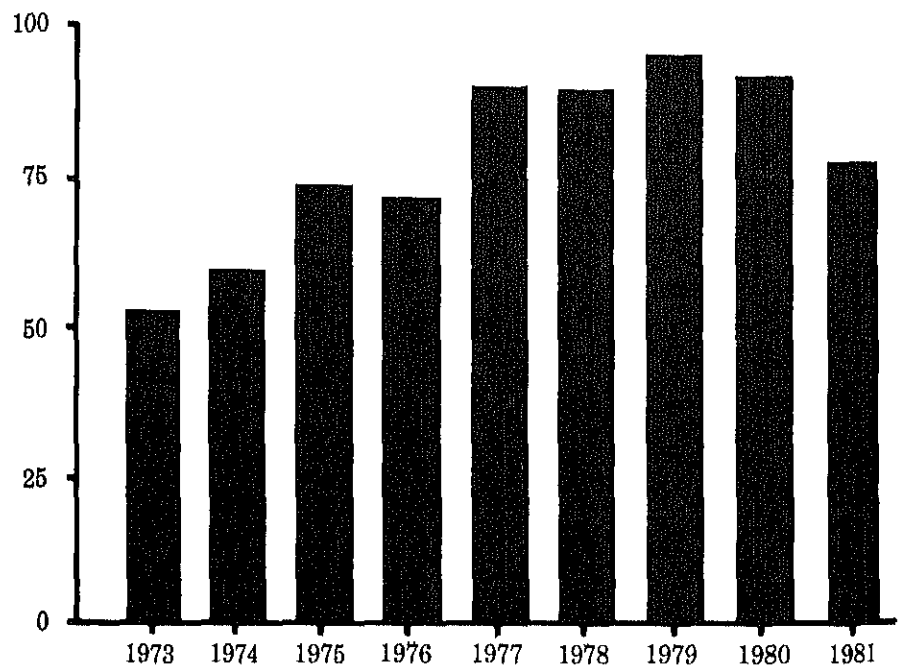
Source table: "Finished Motor Gasoline Supply and Disposition."

### Distillate Fuel Oil Ending Stocks, Annual (Millions of Barrels)



See table: "Distillate Fuel Oil Supply and Disposition."

### Residual Fuel Oil Ending Stocks, Annual (Millions of Barrels)



See table: "Residual Fuel Oil Supply and Disposition."

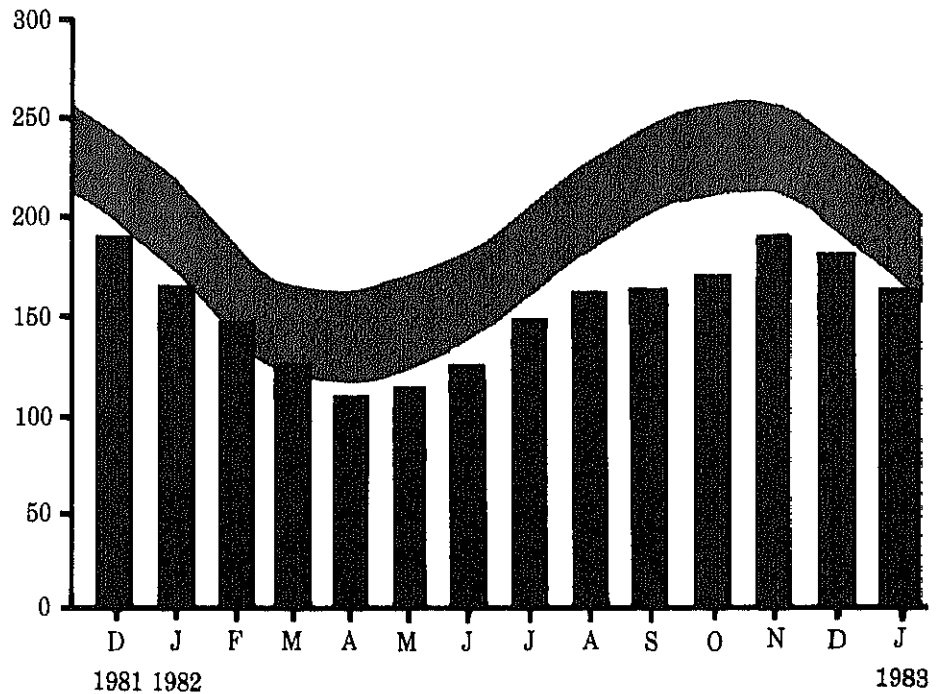
## Distillate Fuel Oil Ending Stocks, Monthly (Millions of Barrels)

### Legend

 Average Stock Range<sup>1</sup>


<sup>1</sup>Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Distillate Fuel Oil Supply and Disposition."



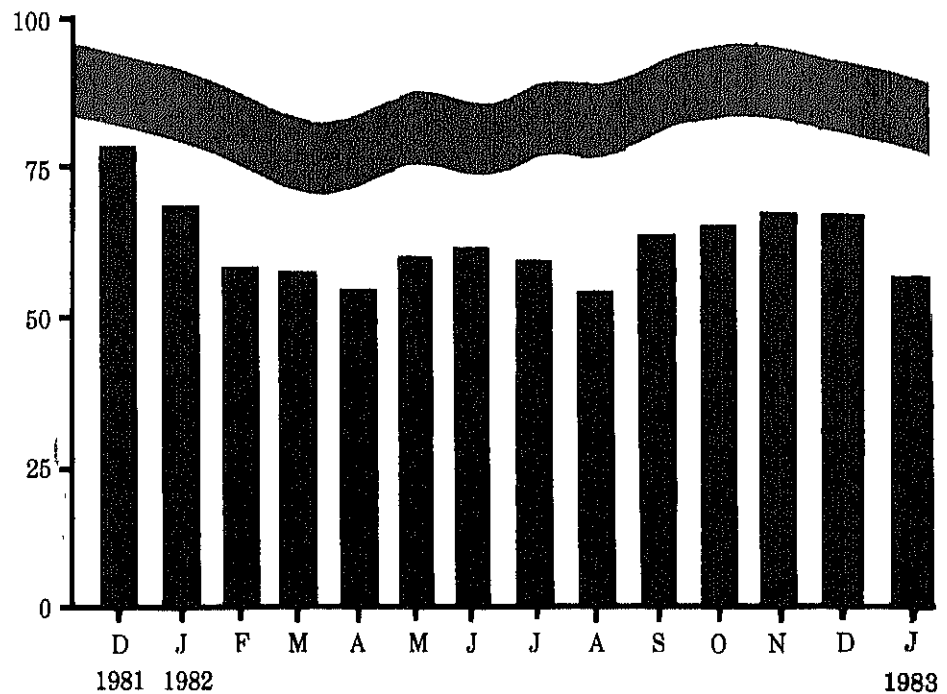
## Residual Fuel Oil Ending Stocks, Monthly (Millions of Barrels)

### Legend

 Average Stock Range<sup>1</sup>

<sup>1</sup>Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Residual Fuel Oil Supply and Disposition."



# Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly	Exports	Products Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	971	1,853	5	17	23	2,822	53
1974	AVERAGE	1,070	1,587	-17	13	14	2,639	60
1975	AVERAGE	1,235	1,223	2	15	15	2,482	74
1976	AVERAGE	1,377	1,413	5	17	12	2,801	72
1977	AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978	AVERAGE	1,667	1,355	-1	13	13	3,023	90
1979	AVERAGE	1,687	1,151	-15	12	9	2,826	96
1980	AVERAGE	1,580	939	10	12	33	2,508	92
1981	January	1,612	1,015	302	32	65	2,896	82
	February	1,565	954	150	44	125	2,588	78
	March	1,424	699	100	48	145	2,126	75
	April	1,320	584	66	49	151	1,868	73
	May	1,223	741	-170	49	25	1,817	78
	June	1,232	540	291	49	76	2,037	69
	July	1,174	830	2	48	82	1,971	69
	August	1,231	819	-179	50	69	1,852	75
	September	1,292	841	-176	51	126	1,882	80
	October	1,238	786	8	54	202	1,884	80
	November	1,227	880	-49	53	203	1,909	81
	December	1,329	916	110	52	157	2,250	78
	AVERAGE	1,321	800	37	48	118	2,088	
1982	January	1,183	821	328	53	235	2,150	68
	February	1,136	928	358	53	213	2,261	58
	March	1,121	910	26	53	197	1,912	57
	April	1,162	762	124	52	234	1,867	54
	May	1,127	738	-175	52	191	1,551	59
	June	1,077	643	-49	50	217	1,504	61
	July	1,029	576	51	49	239	1,466	59
	August	1,007	519	200	47	235	1,538	53
	September	1,007	871	-302	44	148	1,472	62
	October	954	758	-56	43	234	1,466	64
	November	989	843	-95	43	182	1,597	66
	December*	R 990	R 747	R 8	43	186	R 1,602	R 66
	AVERAGE	1,065	758	33	48	209	1,695	
1983	January**	1,029	627	385	NA	NA	1,825	56

<sup>1</sup> Ending Stocks for 1973-1980 are totals as of December 31

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 5.4.

\*\* Italics denote preliminary data. See Explanatory Note 2.7.

Notes: Beginning in January 1981, survey forms were modified.

See Explanatory Note 4 on changes for the effects on residual fuel oil statistics.

Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Liquefied Petroleum Gases and Ethane Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Refinery Inputs	Exports	Product Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	1,600	132	-35	220	27	1,449	99
1974	AVERAGE	1,565	123	-38	220	25	1,406	113
1975	AVERAGE	1,527	112	-35	246	26	1,333	125
1976	AVERAGE	1,535	130	24	260	25	1,404	116
1977	AVERAGE	1,566	161	-55	233	18	1,422	136
1978	AVERAGE	1,537	123	12	239	20	1,413	132
1979	AVERAGE	1,556	217	70	236	15	1,592	111
1980	AVERAGE	1,535	216	-27	233	21	1,469	120
1981	January	1,617	306	363	352	21	1,913	117
	February	1,593	327	173	303	21	1,769	112
	March	1,551	260	-4	257	20	1,530	112
	April	1,566	214	-236	231	26	1,308	119
	May	1,587	189	-258	220	19	1,279	127
	June	1,567	206	-208	237	24	1,304	133
	July	1,507	213	-258	215	17	1,229	141
	August	1,592	195	-242	235	149	1,160	149
	September	1,622	199	-75	287	21	1,438	151
	October	1,593	287	72	320	76	1,556	149
	November	1,571	280	86	383	58	1,495	146
	December	1,468	255	379	428	50	1,624	135
	AVERAGE	1,571	244	-18	289	42	1,466	
1982	January	1,546	314	480	398	67	1,873	122
	February	1,476	291	310	327	51	1,699	114
	March	1,523	223	145	289	74	1,528	109
	April	1,566	188	107	257	77	1,527	106
	May	1,583	186	-61	235	43	1,431	108
	June	1,571	192	-109	262	106	1,286	111
	July	1,556	227	-5	253	37	1,487	111
	August	1,591	125	-44	254	61	1,357	112
	September	1,606	247	33	273	85	1,528	111
	October	1,582	194	92	306	81	1,481	109
	November	1,603	267	172	370	37	1,634	103
	December*	1,626	258	270	395	56	1,702	95
	AVERAGE	1,570	225	115	301	65	1,544	

<sup>1</sup> Ending stocks for 1973 - 1980 are totals as of December 31.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 5.5.

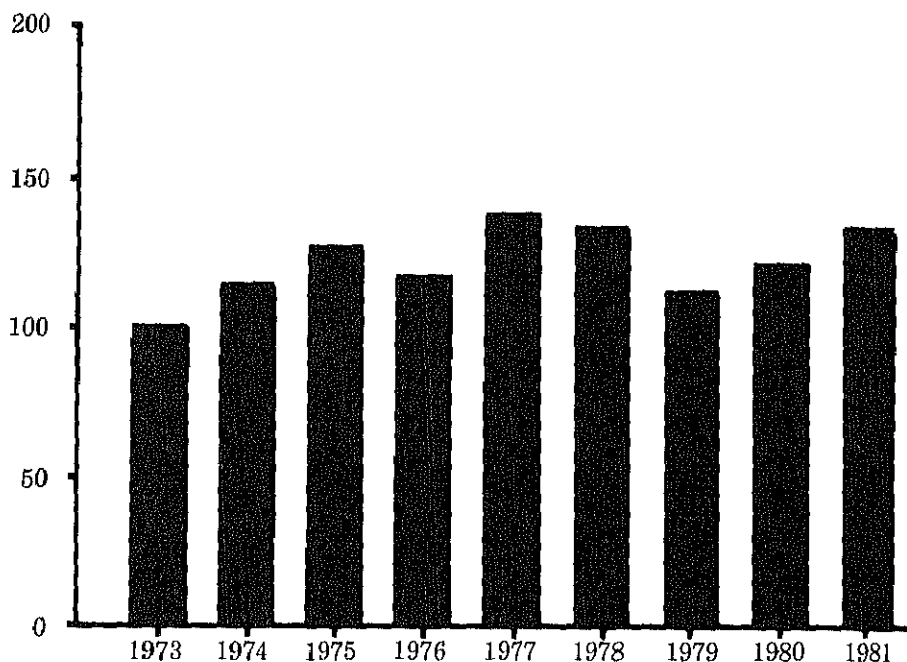
Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

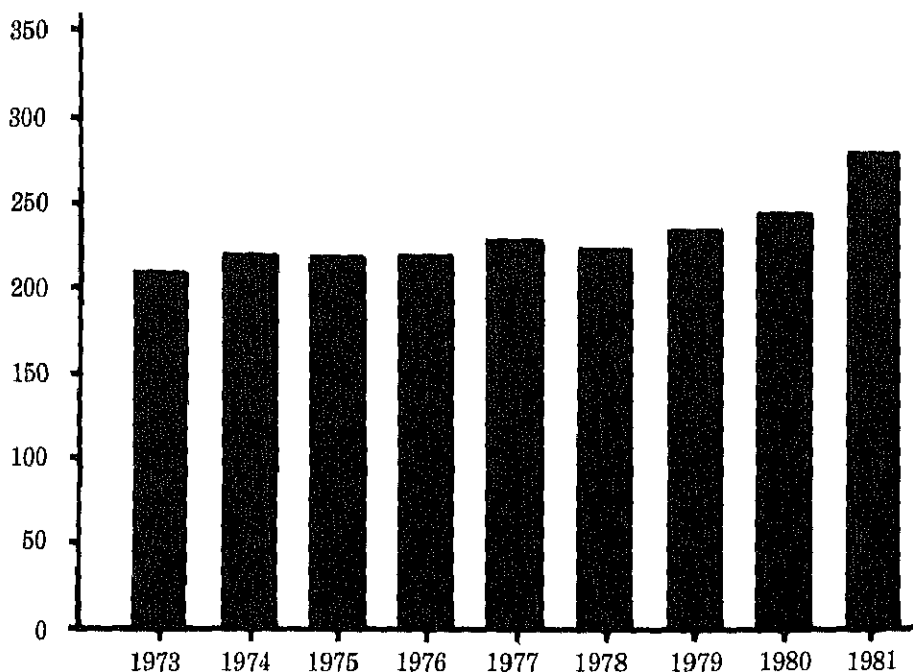


# **Liquefied Petroleum Gases and Ethane Ending Stocks, Annual** (Millions of Barrels)



Source table: "Liquefied Petroleum Gases and Ethane Supply and Disposition."

## **Other Petroleum Products<sup>1</sup> Ending Stocks, Annual** (Millions of Barrels)



Includes natural gasoline and pentane, unfinished oils, gasoline blending components, jet fuels, kerosene, lubricants, and asphalt. Some gasoline blending components not included prior to 1981.

Source table: "Other Petroleum Products Supply and Disposition."

## Liquefied Petroleum Gases and Ethane Ending Stocks, Monthly (Millions of Barrels)

### Legend

■ Average Stock Range<sup>1</sup>

Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Liquefied Petroleum Gases and Ethane Supply and Disposition."



## Other Petroleum Products<sup>1</sup> Endings Stocks, Monthly (Millions of Barrels)

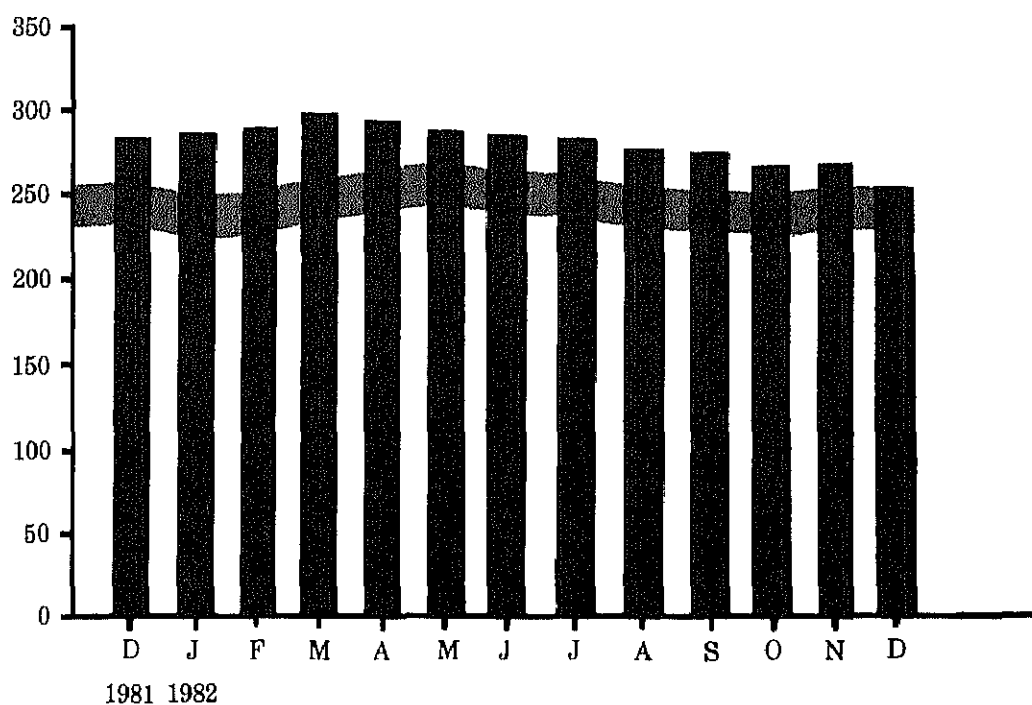
### Legend

■ Average Stock Range<sup>2</sup>

includes natural gasoline and pentane, unfinished oils, gasoline blending components, jet fuels, kerosene, lubricants, and asphalt.

Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Other Petroleum Products Supply and Disposition."



# Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	3,693	502	-9	750	166	3,270	208
1974	AVERAGE	3,558	432	-28	665	174	3,123	218
1975	AVERAGE	3,424	277	-2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,046	166	14	492	167	3,568	225
1979	AVERAGE	4,153	195	-37	352	209	3,749	238
1980	AVERAGE	3,958	210	-23	311	198	3,634	247
1981	January	3,821	162	80	851	132	3,081	296
	February	3,723	182	-200	536	208	2,958	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,892	229	-58	594	238	3,231	305
	June	3,925	218	-29	656	197	3,261	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	676	219	3,225	298
	September	3,718	285	215	883	176	3,159	291
	October	3,503	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	3,739	226	46	723	199	3,088	
1982	January	3,181	240	-102	602	180	2,536	284
	February	3,364	260	-116	646	138	2,724	287
	March	3,485	241	-204	734	161	2,627	294
	April	3,394	287	91	801	204	2,767	291
	May	3,296	309	198	823	210	2,769	285
	June	3,481	315	115	815	216	2,879	281
	July	3,578	391	15	862	187	2,935	281
	August	3,519	329	266	841	202	3,060	273
	September	3,442	365	74	767	213	2,901	271
	October	3,472	367	223	901	266	2,896	264
	November	3,464	406	-12	824	269	2,766	264
	December*	3,285	314	363	886	275	2,801	253
	AVERAGE	3,413	319	77	793	211	2,805	

<sup>1</sup> Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil.

<sup>2</sup> Ending Stocks for 1973-1980 are totals as of December 31.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 5.6.

Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage. Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil and Petroleum Product Imports from OPEC Sources<sup>1</sup>

	Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
	Thousand Barrels per Day										
<b>1973 AVERAGE</b>	136	164	486	71	213	223	459	1,135	106	2,993	915
<b>1974 AVERAGE</b>	190	4	461	74	300	469	713	979	88	3,280	752
<b>1975 AVERAGE</b>	282	232	715	117	390	280	762	702	122	3,601	1,383
<b>1976 AVERAGE</b>	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
<b>1977 AVERAGE</b>	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
<b>1978 AVERAGE</b>	649	654	1,144	385	573	555	919	645	226	5,751	2,963
<b>1979 AVERAGE</b>	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
<b>1980 AVERAGE</b>	488	554	1,261	172	348	9	857	481	130	4,300	2,551
<b>1981</b>											
January	341	500	1,284	93	424	0	908	549	27	4,127	2,219
February	381	468	1,122	93	406	0	866	463	92	3,891	2,064
March	352	485	1,027	47	328	0	771	360	54	3,425	1,912
April	263	485	1,034	68	307	0	812	237	39	3,245	1,867
May	393	443	933	17	297	0	664	331	124	3,203	1,796
June	356	380	866	60	367	0	528	248	118	2,922	1,703
July	333	251	1,073	80	340	0	651	466	38	3,233	1,757
August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
September	336	154	1,477	96	371	0	323	359	149	3,264	2,063
October	242	147	1,342	90	427	0	412	389	172	3,220	1,820
November	210	132	1,270	112	353	0	517	535	56	3,184	1,724
December	176	122	1,045	158	400	0	684	411	132	3,129	1,502
<b>AVERAGE</b>	<b>311</b>	<b>319</b>	<b>1,129</b>	<b>81</b>	<b>366</b>	<b>0</b>	<b>620</b>	<b>406</b>	<b>90</b>	<b>3,323</b>	<b>1,848</b>
<b>1982</b>											
January	254	161	877	87	273	0	662	376	128	2,818	1,378
February	139	92	692	79	236	0	579	347	102	2,267	1,044
March	91	37	555	155	200	0	503	399	91	2,032	860
April	85	0	479	122	215	0	427	411	79	1,818	707
May	179	0	601	116	236	0	211	414	54	1,811	897
June	93	0	593	94	215	72	537	361	110	2,075	799
July	122	0	644	123	327	69	910	349	95	2,640	927
August	170	0	489	133	272	27	542	288	134	2,057	807
September	162	0	432	57	191	21	479	514	52	1,907	659
October	249	7	494	61	227	108	291	496	96	2,029	810
November	247	13	489	47	283	34	480	539	115	2,246	795
December	141	0	237	12	265	88	447	389	73	1,661	407
<b>AVERAGE</b>	<b>161</b>	<b>26</b>	<b>548</b>	<b>91</b>	<b>245</b>	<b>35</b>	<b>505</b>	<b>408</b>	<b>94</b>	<b>2,113</b>	<b>840</b>

<sup>1</sup> Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup> Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar. Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve Imports are included.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Crude Oil and Petroleum Product Imports from Non-OPEC Sources<sup>1</sup>

	Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico <sup>2</sup>	Virgin Islands <sup>2</sup>	Other <sup>3</sup>	Total
Thousand Barrels per Day										
<b>1973</b>										
<b>AVERAGE</b>	174	1,325	16	585	255	15	99	329	465	3,263
<b>1974</b>										
<b>AVERAGE</b>	164	1,070	8	511	251	8	90	391	340	2,832
<b>1975</b>										
<b>AVERAGE</b>	152	846	71	332	242	14	90	406	300	2,454
<b>1976</b>										
<b>AVERAGE</b>	118	599	87	275	274	31	88	422	353	2,247
<b>1977</b>										
<b>AVERAGE</b>	171	517	179	211	289	126	105	466	550	2,614
<b>1978</b>										
<b>AVERAGE</b>	160	467	318	229	253	180	94	429	484	2,613
<b>1979</b>										
<b>AVERAGE</b>	147	538	439	231	190	202	92	431	548	2,819
<b>1980</b>										
<b>AVERAGE</b>	78	455	533	225	176	176	88	388	491	2,609
<b>1981</b>										
January	39	543	401	198	150	233	89	494	552	2,701
February	84	546	437	227	163	271	46	481	626	2,881
March	74	472	488	227	93	263	45	370	571	2,603
April	68	412	418	198	139	402	40	365	380	2,423
May	122	365	522	213	105	368	58	344	474	2,573
June	51	353	538	196	124	397	67	262	525	2,513
July	77	382	384	212	178	553	50	206	541	2,583
August	69	378	489	255	123	592	68	184	539	2,698
September	111	423	708	163	169	528	72	265	661	3,100
October	63	449	669	161	121	351	60	303	562	2,739
November	63	547	628	168	108	253	76	294	421	2,557
December	70	501	587	148	125	280	73	367	563	2,714
<b>AVERAGE</b>	74	447	522	197	133	375	62	327	534	2,672
<b>1982</b>										
January	28	509	426	179	106	346	62	334	425	2,415
February	50	533	489	221	120	132	38	354	487	2,424
March	43	435	503	189	118	293	62	307	479	2,429
April	67	357	467	180	166	247	36	266	682	2,468
May	76	416	767	152	95	516	47	302	603	2,974
June	32	462	797	141	129	539	58	322	673	3,153
July	30	527	783	158	111	433	38	369	674	3,122
August	68	435	854	145	106	520	24	320	627	3,099
September	92	484	897	195	89	631	51	270	744	3,453
October	45	456	682	148	109	666	52	262	783	3,202
November	48	547	860	203	90	623	81	334	694	3,480
December	89	561	675	174	102	438	48	336	480	2,901
<b>AVERAGE</b>	56	477	684	173	112	451	50	315	613	2,928

<sup>1</sup> Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> U.S. Possessions.

<sup>3</sup> Includes all Non-OPEC countries except those shown above.

Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Sources

- 1973 through 1976: Bureau of Mines, U.S. Department of the Interior, "Petroleum Statement, Annual" and PAD Districts Supply/Demand, Annual," Mineral Industry Surveys.
- 1977 through 1980: Energy Information Administration, U.S. Department of Energy, "Monthly Petroleum Statistics Report," (unleaded gasoline category).
- 1977 through 1980: Energy Information Administration, U.S. Department of Energy, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual," "Energy Data Reports.
- January 1981 through December 1981: Energy Information Administration, U.S. Department of Energy, "Petroleum Supply Annual."
- January 1982 through December 1982: Detailed statistics in this issue. (See Explanatory Notes 5.1 through 5.6).
- January 1983: Estimates based on EIA weekly data (except domestic crude oil production). (See Explanatory Note 2.7).
- January 1982 through January 1983: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U.S. Geological Survey. (See Explanatory Note 2.2).



# Detailed Statistics







Table 1. U.S. Petroleum Balance, December 1982

	Current Month		Year-to-Date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
<b>Crude Oil (Including Lease Condensate)</b>				
Field Production				
(1) Alaska ...	E 51,538	1,663	E 618,753	1,695
(2) Lower 48 States ...	E 216,922	6,997	E 2,546,219	6,976
(3) Total U.S. ...	E 268,460	8,660	E 3,164,972	8,671
Net Imports				
(4) Imports (Gross Excluding SPR) ...	87,807	2,832	1,202,889	3,296
(5) SPR Imports ...	3,831	124	60,193	165
(6) Exports ...	5,970	193	86,279	236
(7) Imports (Net Including SPR) ...	85,667	2,763	1,176,802	3,224
Other Sources				
(8) SPR Withdrawal (+) or Addition (-) ...	-3,864	-125	-63,486	-174
(9) Other Stock Withdrawal (+) or Addition (-) ...	8,291	267	15,728	43
(10) Used Directly and Losses ...	-1,674	-54	-22,481	-62
(11) Unaccounted for 1 ...	66	2	26,890	74
(12) Total Other Sources ...	2,819	91	-43,349	-119
(13) Crude Input to Refineries ...	356,947	11,514	4,298,425	11,777
(13) = (3) + (7) + (12)				
<b>Natural Gas Plant Liquids (NGPL)</b>				
(14) Field Production ...	50,790	1,638	567,181	1,554
(15) Imports 2 ...	145	5	7,668	21
(16) Stock Withdrawal (+) or Addition (-) 2 ...	1,359	44	4,493	12
(17) Total NGPL Supply ...	52,294	1,687	579,342	1,587
<b>Other Liquids</b>				
Unfinished Oils and Gasoline Blending Components, Total				
(18) Stock Withdrawal (+) or Addition (-) ...	5,907	191	14,764	40
(19) Imports ...	7,742	250	64,013	175
(20) Other Hydrocarbons and Alcohol New Supply (Field Production) ...	1,541	50	19,222	53
(21) Refinery Processing Gain 1 ...	18,956	612	193,050	529
(22) Crude Used Directly ...	1,621	52	21,419	59
(23) Total Other Liquids ...	35,769	1,154	312,468	856
(23) = (18) through (22)				
(24) Total Production of Products 3 ...	445,010	14,355	5,190,235	14,220
(24) = (13) + (17) + (23)				
<b>Net Imports of Refined Products 3</b>				
(25) Imports (Gross) ...	41,905	1,352	505,424	1,385
(26) Exports ...	20,687	667	211,235	579
(27) Imports (Net) ...	21,218	684	294,189	806
(28) Total New Supply of Products ...	466,229	15,040	5,484,425	15,026
(28) = (24) + (27)				
(29) Refined Products Stock Withdrawal (+) or Addition (-) 3 ...	14,534	469	83,222	228
(30) Total Petroleum Products Supplied for Domestic Use ...	480,763	15,508	5,567,646	15,254
(30) = (28) + (29)				
<b>Finished Motor Gasoline</b>				
(31) Finished Motor Gasoline ...	202,983	6,548	2,386,236	6,538
(32) Naphtha-Type Jet Fuel ...	6,582	212	75,754	208
(33) Kerosene-Type Jet Fuel ...	26,081	841	292,529	801
(34) Kerosene ...	5,806	187	46,791	128
(35) Distillate Fuel Oil ...	88,522	2,856	976,822	2,676
(36) Residual Fuel Oil ...	49,654	1,602	618,351	1,694
(37) Liquefied Petroleum Gases and Ethane ...	52,762	1,702	561,102	1,537
(38) Other ...	54,908	1,771	723,369	1,982
(39) Total Reclassified 1 ...	-6,514	-210	-113,306	-310
(40) Total Product Supplied ...	480,763	15,508	5,567,646	15,254
(40) = (31) through (39)				
<b>Ending Stocks, All Oils</b>				
(41) Crude Oil and Lease Condensate (Excluding SPR) ...	347,736	—	347,736	—
(42) Strategic Petroleum Reserve (SPR) ...	293,827	—	293,827	—
(43) Unfinished Oils ...	105,277	—	105,277	—
(44) Gasoline Blending Components ...	41,738	—	41,738	—
(45) Natural Gasoline and Unfractionated Stream ...	11,026	—	11,026	—
(46) Finished Refined Products 3 ...	629,323	—	629,323	—
(47) Total Stocks ...	1,428,927	—	1,428,927	—

1 A balancing item.

2 Includes isopentane, natural gasoline, unfractionated stream, and plant condensate only.

3 For products included see Explanatory Note 5.7.

E = Estimated.

— Not Applicable.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2, and 5.7.

Table 2. Supply and Disposition of Crude Oil and Petroleum Products, December 1982  
(Thousands of Barrels)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate) .....										
E 268,460		0	91,638	4,427	67	-1,674	356,947	5,970	0	641,563
Natural Gas Plant Liquids and LRGs .....										
Natural Gasoline and Isopentane .....	50,440	8,365	8,151	9,714	0	0	18,017	1,740	56,913	106,138
Unfractionated Stream .....	8,444	0	1	319	0	0	4,635	0	4,129	6,007
Plant Condensate .....	-821	0	0	841	0	0	0	0	20	3,573
Liquefied Petroleum Gases and Ethane .....	782	0	144	189	0	0	1,123	0	3	1,446
Ethane .....	42,035	8,365	8,006	8,355	0	0	12,259	1,740	52,762	95,112
Propane .....	9,211	56	1,558	194	0	0	34	(8)	10,984	5,212
Butane .....	14,090	8,629	1,632	3,358	0	0	115	1,065	26,528	54,512
Butane-Propane Mixtures .....	6,477	-153	2,185	4,367	0	0	7,648	675	4,547	15,425
Ethane-Propane Mixtures .....	144	-178	0	-497	0	0	157	0	-688	1,893
Isobutane .....	8,858	0	2,632	-119	0	0	0	0	11,370	9,774
	3,256	17	0	1,053	0	0	4,305	0	21	8,297
Other Liquids .....										
Other Hydrocarbons and Alcohol .....	1,541	0	7,742	5,907	0	0	21,704	0	-6,514	147,015
Unfinished Oils .....	1,541	0	0	-100	0	0	1,441	0	0	311
Motor Gasoline Blending Components .....	0	0	6,672	6,402	0	0	16,350	0	-3,276	105,277
Aviation Gasoline Blending Components .....	0	0	1,070	-254	0	0	4,135	0	-3,319	40,935
	0	0	0	-141	0	0	-222	0	81	492
Finished Petroleum Products .....										
Finished Motor Gasoline .....	350	407,261	33,899	6,180	0	1,621	0	18,947	430,364	534,211
Finished Leaded Motor Gasoline .....	84	202,659	5,523	-5,075	0	0	0	208	202,983	194,436
Finished Unleaded Motor Gasoline .....	69	93,586	3,957	-2,483	0	0	0	208	94,922	98,161
Gasohol .....	14	108,942	1,566	-2,571	0	0	0	0	107,951	96,204
Finished Aviation Gasoline .....	0	131	0	-21	0	0	0	0	110	72
Naphtha-Type Jet Fuel .....	54	340	(8)	214	0	0	0	0	608	2,306
Kerosene-Type Jet Fuel .....	0	6,201	0	362	0	0	0	1	6,562	5,673
Kerosene .....	(8)	23,216	225	3,332	0	0	0	692	26,081	31,176
Distillate Fuel Oil .....	2	4,410	477	917	0	0	0	1	5,806	10,428
Residual Fuel Oil .....	2	82,294	3,366	6,997	0	297	0	4,436	88,522	178,595
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	30,676	23,170	256	0	1,324	0	5,771	49,654	66,175
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	4,290	6	33	0	0	0	187	4,142	1,967
Special Naphthas .....	0	7,724	0	14	0	0	0	670	7,068	2,180
Lubricants .....	43	1,225	704	-14	0	0	0	24	1,935	3,474
Waxes .....	0	3,551	255	117	0	0	0	438	3,485	12,531
Petroleum Coke .....	0	448	110	-32	0	0	0	21	505	786
Asphalt .....	0	13,352	0	-28	0	0	0	6,308	7,016	6,721
Road Oil .....	0	7,500	59	-1,793	0	0	0	159	5,608	15,884
Still Gas .....	0	9	0	7	0	0	0	0	16	47
Miscellaneous Products .....	0	16,825	0	0	0	0	0	0	16,825	0
	164	2,541	3	872	0	0	0	32	3,548	1,832
Total .....	320,791	415,626	141,430	26,228	67	-53	396,668	26,657	480,763	1,428,927

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

(8) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. Year-to-Date Supply and Disposition Statistics of Crude Oil and Petroleum Products, January - December 1982  
(Thousands of Barrels)

Commodity	Supply					Disposition			Ending Stocks	
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports		Products Supplied
<b>Crude Oil (including lease condensate)</b> .....	E 3,164,972	0	1,263,081	-47,758	26,890	-22,481	4,298,425	86,279	0	641,563
<b>Natural Gas Plant Liquids and LRGs</b> .....	561,984	99,019	89,978	44,032	0	0	188,148	23,596	583,269	106,138
Natural Gasoline and Isopentane .....	76,652	0	5,814	3,386	0	0	64,048	0	21,805	6,007
Unfractionated Stream .....	-667	0	0	979	0	0	8	0	304	3,573
Plant Condensate .....	12,131	0	1,854	128	0	0	14,055	0	58	1,446
Liquefied Petroleum Gases and Ethane .....	473,868	99,019	82,310	39,539	0	0	110,037	23,596	561,102	95,112
Ethane .....	101,323	1,474	17,240	-298	0	0	1,378	1	118,359	5,212
Propane .....	168,079	92,928	22,952	21,046	0	0	1,441	11,457	292,106	54,512
Butane .....	79,854	3,351	21,551	11,829	0	0	64,787	12,139	39,660	15,425
Butane-Propane Mixtures .....	1,520	1,235	8,065	-140	0	0	2,001	0	8,678	1,893
Ethane-Propane Mixtures .....	83,017	0	12,503	6,661	0	0	46	0	102,135	9,774
Isobutane .....	40,075	31	0	441	0	0	40,384	0	164	8,297
<b>Other Liquids</b> .....	19,222	0	64,013	14,764	0	0	211,305	0	-113,306	147,015
Other Hydrocarbons and Alcohol .....	19,222	0	0	-103	0	0	18,119	0	0	311
Unfinished Oils .....	0	0	49,907	6,071	0	0	129,384	0	-73,406	105,277
Motor Gasoline Blending Components .....	0	0	14,105	8,597	0	0	63,581	0	-40,879	40,935
Aviation Gasoline Blending Components .....	0	0	0	199	0	0	-779	0	978	492
<b>Finished Petroleum Products</b> .....	5,199	4,791,909	423,115	43,683	0	21,419	0	187,639	5,097,685	534,211
Finished Motor Gasoline .....	629	2,315,896	67,874	9,032	0	0	0	7,195	2,386,236	194,436
Finished Leaded Motor Gasoline .....	592	1,096,638	43,647	9,924	0	0	0	7,195	1,143,606	98,161
Finished Unleaded Motor Gasoline .....	37	1,218,043	24,227	-879	0	0	0	0	1,241,429	96,204
Gasohol .....	0	1,215	0	-13	0	0	0	0	1,202	72
Finished Aviation Gasoline .....	716	8,176	2	427	0	0	0	0	9,322	2,306
Naphtha-Type Jet Fuel .....	0	72,977	1,682	1,381	0	0	0	287	75,754	5,673
Kerosene-Type Jet Fuel .....	2	289,536	7,946	2,835	0	0	0	1,790	292,529	31,176
Kerosene .....	41	41,941	4,509	615	0	0	0	315	46,791	10,428
Distillate Fuel Oil .....	28	953,420	33,822	12,946	0	3,731	0	27,124	976,822	178,595
Residual Fuel Oil .....	0	388,614	276,680	11,817	0	17,688	0	76,448	618,351	66,175
Naphtha < 400 Deg. for Petro Feed. ....	0	54,916	16,748	502	0	0	0	1,504	70,662	1,967
Other Oils > 400 Deg. for Petrochem. Feedstock ...	0	96,523	0	-430	0	0	0	7,238	88,855	2,180
Special Naphthas .....	886	18,415	7,339	490	0	0	0	1,750	25,380	3,474
Lubricants .....	0	51,563	3,558	1,773	0	0	0	6,012	50,882	12,531
Waxes .....	0	5,134	542	-116	0	0	0	252	5,309	786
Petroleum Coke .....	0	149,360	0	-2,219	0	0	0	56,824	90,317	6,721
Asphalt .....	0	119,556	1,730	3,703	0	0	0	444	124,545	15,884
Road Oil .....	0	610	2	-21	0	0	0	0	591	47
Still Gas .....	0	202,263	0	0	0	0	0	0	202,263	0
Miscellaneous Products .....	2,897	29,009	680	948	0	0	0	456	33,077	1,832
<b>Total</b> .....	3,751,377	4,890,928	1,840,187	54,721	26,890	-1,062	4,697,878	297,514	5,567,648	1,428,927

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 4. Supply and Disposition of Crude Oil and Petroleum Products, December 1982  
(Thousand Barrels per Day)

Commodity	Supply					Disposition			
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports	Products Supplied
<b>Crude Oil (including lease condensate)</b>	<b>E 8,660</b>	<b>0</b>	<b>2,956</b>	<b>143</b>	<b>2</b>	<b>-54</b>	<b>11,514</b>	<b>193</b>	<b>0</b>
<b>Natural Gas Plant Liquids and LRGs</b>	<b>1,627</b>	<b>270</b>	<b>263</b>	<b>313</b>	<b>0</b>	<b>0</b>	<b>581</b>	<b>56</b>	<b>1,836</b>
Natural Gasoline and Isopentane	272	0	(s)	10	0	0	150	0	133
Unfractionated Stream	-26	0	0	27	0	0	0	0	1
Plant Condensate	25	0	5	6	0	0	36	0	(s)
Liquefied Petroleum Gases and Ethane	1,356	270	258	270	0	0	395	56	1,702
Ethane	297	2	50	6	0	0	1	(s)	354
Propane	455	278	53	108	0	0	4	34	856
Butane	209	-5	70	141	0	0	247	22	147
Butane-Propane Mixtures	5	-6	0	-16	0	0	5	0	-22
Ethane-Propane Mixtures	286	0	85	-4	0	0	0	0	367
Isobutane	105	1	0	34	0	0	139	0	1
<b>Other Liquids</b>	<b>50</b>	<b>0</b>	<b>250</b>	<b>191</b>	<b>0</b>	<b>0</b>	<b>700</b>	<b>0</b>	<b>-210</b>
Other Hydrocarbons and Alcohol	50	0	0	-3	0	0	46	0	0
Unfinished Oils	0	0	215	207	0	0	527	0	-106
Motor Gasoline Blending Components	0	0	35	-8	0	0	133	0	-107
Aviation Gasoline Blending Components	0	0	0	-5	0	0	-7	0	3
<b>Finished Petroleum Products</b>	<b>11</b>	<b>13,137</b>	<b>1,094</b>	<b>199</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>611</b>	<b>13,883</b>
Finished Motor Gasoline	3	6,537	178	-164	0	0	0	7	6,548
Finished Leaded Motor Gasoline	2	3,019	128	-80	0	0	0	7	3,062
Finished Unleaded Motor Gasoline	(s)	3,514	51	-83	0	0	0	0	3,482
Gasohol	0	4	0	-1	0	0	0	0	4
Finished Aviation Gasoline	2	11	(s)	7	0	0	0	0	20
Naphtha-Type Jet Fuel	0	200	0	12	0	0	0	(s)	212
Kerosene-Type Jet Fuel	(s)	749	7	107	0	0	0	0	841
Kerosene	(s)	142	15	30	0	0	0	(s)	187
Distillate Fuel Oil	(s)	2,655	109	226	0	10	0	143	2,856
Residual Fuel Oil	0	990	747	8	0	43	0	186	1,602
Naphtha < 400 Deg. for Petro. Feed. Use	0	138	(s)	1	0	0	0	6	134
Other Oils > 400 Deg. for Petro. Feed. Use	0	249	0	(s)	0	0	0	22	228
Special Naphthas	1	40	23	(s)	0	0	0	1	62
Lubricants	0	115	8	4	0	0	0	14	112
Waxes	0	14	4	-1	0	0	0	1	16
Petroleum Coke	0	431	0	-1	0	0	0	203	226
Asphalt	0	242	2	-58	0	0	0	5	181
Road Oil	0	(s)	0	(s)	0	0	0	0	1
Still Gas	0	543	0	0	0	0	0	0	543
Miscellaneous Products	5	82	(s)	28	0	0	0	1	114
<b>Total</b>	<b>10,348</b>	<b>13,407</b>	<b>4,562</b>	<b>846</b>	<b>2</b>	<b>-2</b>	<b>12,796</b>	<b>860</b>	<b>15,508</b>

1. Unaccounted for crude oil

2. Losses

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

(s) Less than 500 barrels per day.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January - December 1982  
(Thousand Barrels per Day)

Commodity	Supply					Disposition			
	Field Production	Refinery Production	Imports	Stock Withdrawal(+) Addition(-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 8,571	0	3,460	-131	74	-62	11,777	236	0
Natural Gas Plant Liquids and LRGs	1,540	271	247	121	0	0	515	65	1,598
Natural Gasoline and Isopentane	210	0	16	9	0	0	175	0	60
Unfractionated Stream	-2	0	0	3	0	0	(s)	0	1
Plant Condensate	33	0	5	(s)	0	0	39	0	(s)
Liquefied Petroleum Gases and Ethane	1,298	271	226	108	0	0	301	65	1,537
Ethane	278	4	47	-1	0	0	4	(s)	324
Propane	460	255	63	58	0	0	4	31	800
Butane	219	9	59	32	0	0	177	33	109
Butane-Propane Mixtures	4	3	22	(s)	0	0	5	0	24
Ethane-Propane Mixtures	227	0	34	18	0	0	(s)	0	280
Isobutane	110	(s)	0	1	0	0	111	0	(s)
Other Liquids	53	0	175	40	0	0	579	0	-310
Other Hydrocarbons and Alcohol	53	0	0	(s)	0	0	52	0	0
Unfinished Oils	0	0	137	17	0	0	354	0	-201
Motor Gasoline Blending Components	0	0	39	24	0	0	174	0	-112
Aviation Gasoline Blending Components	0	0	0	1	0	0	-2	0	3
Finished Petroleum Products	14	13,129	1,159	120	0	59	0	514	13,966
Finished Motor Gasoline	2	6,345	186	25	0	0	0	20	6,538
Finished Leaded Motor Gasoline	2	3,004	120	27	0	0	0	20	3,133
Finished Unleaded Motor Gasoline	(s)	3,337	66	-2	0	0	0	0	3,401
Gasohol	0	3	0	(s)	0	0	0	0	3
Finished Aviation Gasoline	2	22	(s)	1	0	0	0	0	26
Naphtha-Type Jet Fuel	0	200	5	4	0	0	0	1	208
Kerosene-Type Jet Fuel	(s)	777	22	8	0	0	0	5	801
Kerosene	(s)	115	12	2	0	0	0	1	128
Distillate Fuel Oil	(s)	2,612	93	35	0	10	0	74	2,676
Residual Fuel Oil	0	1,065	758	32	0	48	0	209	1,694
Naphtha < 400 Deg. for Petro. Feed. Use	0	150	46	1	0	0	0	4	194
Other Oils > 400 Deg. for Petro. Feed. Use	0	264	0	-1	0	0	0	20	243
Special Naphthas	2	50	20	1	0	0	0	5	70
Lubricants	0	141	10	5	0	0	0	16	139
Waxes	0	14	1	(s)	0	0	0	1	15
Petroleum Coke	0	409	0	-6	0	0	0	156	247
Asphalt	0	328	5	10	0	0	0	1	341
Road Oil	0	2	(s)	(s)	0	0	0	0	2
Still Gas	0	554	0	0	0	0	0	0	554
Miscellaneous Products	8	79	2	3	0	0	0	1	91
Total	10,278	13,400	5,042	150	74	-3	12,871	815	15,254

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

(s) Less than 500 barrels per day.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 6. Production, supply and disposition of Crude Oil and Petroleum Products, December 1982  
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply			Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Disposition			Ending Stocks
				Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>3</sup>				Refinery Inputs	Exports	Products Supplied	
<b>Crude Oil (including lease condensate)</b>	<b>5,207</b>	<b>0</b>	<b>23,953</b>	<b>1,212</b>	<b>4,083</b>	<b>3</b>	<b>3,130</b>	<b>35,098</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17,512</b>
<b>Natural Gas Plant Liquids and LRGs</b>	<b>1,031</b>	<b>1,383</b>	<b>558</b>	<b>191</b>	<b>0</b>	<b>0</b>	<b>2,554</b>	<b>310</b>	<b>53</b>	<b>53</b>	<b>5,354</b>	<b>5,252</b>
Liquefied Petroleum Gases	476	1,383	489	181	0	0	2,554	283	53	53	4,738	5,225
Ethane	319	0	0	0	0	0	0	0	0	0	319	0
Other Products <sup>3</sup>	236	0	69	10	0	0	0	17	0	0	297	27
<b>Other Liquids</b>	<b>178</b>	<b>0</b>	<b>2,603</b>	<b>789</b>	<b>0</b>	<b>0</b>	<b>506</b>	<b>4,799</b>	<b>0</b>	<b>0</b>	<b>-723</b>	<b>19,051</b>
Other Hydrocarbons and Alcohol	178	0	0	-94	0	0	0	84	0	0	0	109
Unfinished Oils	0	0	2,291	1,179	0	0	506	4,722	0	0	-746	13,656
Motor Gasoline Blending Components	0	0	312	-291	0	0	0	-2	0	0	23	5,281
Aviation Gasoline Blending Components	0	0	0	-5	0	0	0	-5	0	0	0	5
<b>Finished Petroleum Products</b>	<b>33</b>	<b>41,387</b>	<b>29,232</b>	<b>10,823</b>	<b>0</b>	<b>0</b>	<b>77,626</b>	<b>0</b>	<b>1,437</b>	<b>1,437</b>	<b>157,663</b>	<b>202,008</b>
Finished Motor Gasoline	33	20,476	4,597	-1,040	0	0	43,015	0	0	1	67,080	62,206
Finished Leaded Motor Gasoline	24	8,013	3,291	-309	0	0	17,832	0	0	1	28,849	29,090
Finished Unleaded Motor Gasoline	9	12,463	1,307	-726	0	0	25,183	0	0	0	38,236	33,105
Gasohol	0	0	0	-5	0	0	0	0	0	0	-5	12
Finished Aviation Gasoline	0	0	(s)	88	0	0	151	0	0	0	239	428
Naphtha-Type Jet Fuel	0	456	0	-144	0	0	510	0	0	0	822	514
Kerosene-Type Jet Fuel	0	689	225	1,017	0	0	8,086	0	0	293	9,724	9,057
Kerosene	0	359	476	557	0	0	1,162	0	0	(s)	2,554	5,207
Distillate Fuel Oil	0	9,004	3,260	8,103	0	0	19,976	0	0	779	39,564	80,588
Residual Fuel Oil	0	4,784	20,311	1,635	0	0	2,877	0	0	(s)	29,607	34,734
<b>Naphtha and Other Oils for Petrochem.</b>	<b>0</b>	<b>419</b>	<b>2</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>0</b>	<b>42</b>	<b>42</b>	<b>559</b>	<b>107</b>
Feedstock	0	23	62	-53	0	0	263	0	0	3	292	893
Special Naphthas	0	457	188	34	0	0	552	0	0	68	1,163	3,279
Lubricants	0	107	52	-19	0	0	7	0	0	5	142	194
Waxes	0	1,180	0	373	0	0	0	0	0	80	1,473	801
Petroleum Coke	0	1,193	58	149	0	0	192	0	0	154	1,438	3,619
Asphalt	0	0	0	0	0	0	0	0	0	0	0	0
Road Oil	0	1,777	0	0	0	0	0	0	0	0	1,777	0
Still Gas	0	463	(s)	32	0	0	746	0	0	12	1,229	381
Miscellaneous Products	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>3,949</b>	<b>42,770</b>	<b>56,345</b>	<b>13,015</b>	<b>4,083</b>	<b>3</b>	<b>83,816</b>	<b>40,207</b>	<b>1,490</b>	<b>1,490</b>	<b>162,294</b>	<b>243,824</b>

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

3 Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 7. PAD District II Supply and Disposition of Crude Oil and Petroleum Products, December 1982  
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply			Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Disposition			Ending Stocks
				Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Refinery Inputs			Exports	Products Supplied		
Crude Oil (including lease condensate) .....	E 32,054	0	19,643	-725	31,938	-5	1,314	84,183	36	0	78,469	
Natural Gas Plant Liquids and LRGs .....	9,813	2,503	6,273	362	0	0	5,711	6,241	360	18,060	31,088	
Liquefied Petroleum Gases .....	8,293	2,480	4,715	1,019	0	0	4,617	4,817	360	15,947	24,317	
Ethane .....	2,753	23	1,558	-349	0	0	0	0	0	3,984	2,109	
Other Products <sup>3</sup> .....	-1,233	0	0	-307	0	0	1,094	1,424	0	-1,871	4,662	
Other Liquids .....	176	0	388	1,238	0	0	987	4,414	0	-1,625	27,083	
Other Hydrocarbons and Alcohol .....	176	0	0	18	0	0	0	194	0	0	70	
Unrefined Oils .....	0	0	253	2,207	0	0	73	2,661	0	-128	17,784	
Motor Gasoline Blending Components .....	0	0	134	-942	0	0	914	1,604	0	-1,498	9,080	
Aviation Gasoline Blending Components .....	0	0	0	-45	0	0	0	-45	0	0	149	
Finished Petroleum Products .....	12	96,202	446	-3,809	0	0	19,656	0	338	112,168	131,573	
Finished Motor Gasoline .....	0	54,741	6	-284	0	0	11,973	0	1	66,435	56,167	
Finished Leaded Motor Gasoline .....	0	27,167	4	-617	0	0	5,918	0	1	32,471	30,378	
Finished Unleaded Motor Gasoline .....	0	27,527	2	348	0	0	6,055	0	0	33,932	25,737	
Gasohol .....	0	47	0	-15	0	0	0	0	0	32	52	
Finished Aviation Gasoline .....	0	54	0	25	0	0	72	0	0	151	542	
Naphtha-Type Jet Fuel .....	0	924	0	24	0	0	96	0	0	1,044	1,304	
Kerosene-Type Jet Fuel .....	0	3,860	0	-189	0	0	1,571	0	0	5,242	7,264	
Kerosene .....	0	867	0	149	0	0	170	0	0	1,186	2,646	
Distillate Fuel Oil .....	2	20,082	1	-1,754	0	0	5,659	0	0	23,990	47,011	
Residual Fuel Oil .....	0	3,573	305	-226	0	0	-302	0	0	3,350	5,222	
Naphtha and Other Oils for Petro. Feed .....	0	1,645	4	-107	0	0	-24	0	21	1,496	368	
Special Naphthas .....	0	324	112	32	0	0	87	0	2	554	630	
Lubricants .....	0	737	14	-162	0	0	91	0	11	668	2,088	
Waxes .....	0	46	3	-11	0	0	0	0	( <sup>4</sup> )	38	79	
Petroleum Coke .....	0	3,318	0	59	0	0	0	0	302	3,075	1,974	
Asphalt .....	0	2,314	1	-1,362	0	0	341	0	1	1,293	6,133	
Road Oil .....	0	-3	0	5	0	0	0	0	0	2	15	
Still Gas .....	0	3,574	0	0	0	0	0	0	0	3,574	0	
Miscellaneous Products .....	10	146	0	-8	0	0	-78	0	1	69	130	
Total .....	42,055	98,705	26,750	-2,934	31,938	-5	27,668	94,838	735	128,603	268,213	

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unrefined stream, and plant condensate.

(<sup>4</sup>) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.  
Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.



Table 8. PAD District III Supply and Disposition of Crude Oil and Petroleum Products, December 1982  
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply		Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Refinery Inputs	Disposition		Ending Stocks
				Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>				Exports	Products Supplied	
Crude Oil (including lease condensate) ..... E 130,039											
Natural Gas Plant Liquids and LRGs ..... 36,238											
Liquefied Petroleum Gases .....	22,524	3,575	0	8,787	0	0	-7,975	9,476	1,167	29,982	66,760
Ethane .....	6,110	16	0	6,645	0	0	-7,235	5,485	1,167	18,841	57,650
Other Products <sup>3</sup> .....	7,604	0	0	544	0	0	0	34	(9)	6,636	3,102
				1,598	0	0	-740	3,957	0	4,505	6,008
Other Liquids .....											
Other Hydrocarbons and Alcohol .....	677	0	4,316	3,576	0	0	-1,839	10,687	0	-3,957	63,094
Unfinished Oils .....	677	0	0	-19	0	0	0	658	0	0	127
Motor Gasoline Blending Components .....	0	0	4,122	2,700	0	0	-925	7,810	0	-1,913	46,209
Aviation Gasoline Blending Components .....	0	0	194	1,002	0	0	-914	2,401	0	-2,119	16,442
	0	0	0	-107	0	0	0	-182	0	75	316
Finished Petroleum Products .....											
Finished Motor Gasoline .....	238	186,432	2,560	4,576	0	9	-101,071	0	10,695	82,048	130,670
Finished Leaded Motor Gasoline .....	0	89,215	(9)	-1,719	0	0	-56,886	0	191	30,419	49,765
Finished Unleaded Motor Gasoline .....	0	40,141	(9)	-582	0	0	-24,660	0	191	14,708	25,056
Gasohol .....	0	49,073	0	-1,137	0	0	-32,226	0	0	15,710	24,709
Finished Aviation Gasoline .....	54	1	0	0	0	0	0	0	0	1	0
Naphtha-Type Jet Fuel .....	0	161	0	61	0	0	-246	0	0	30	655
Kerosene-Type Jet Fuel .....	(9)	3,070	0	252	0	0	-762	0	0	2,560	2,294
Kerosene .....	0	11,621	0	2,221	0	0	-10,584	0	373	2,885	8,961
Distillate Fuel Oil .....	2	2,918	0	242	0	0	-1,332	0	0	1,831	2,387
Residual Fuel Oil .....	(9)	38,500	8	2,615	0	0	-25,975	0	3,162	11,986	34,243
Naphtha and Other Oils for Petro. Feed, .....	0	11,990	1,926	-133	0	9	-2,952	0	3,188	7,653	16,274
Special Naphthas .....	0	9,005	0	180	0	0	-65	0	787	8,333	2,857
Lubricants .....	43	799	520	77	0	0	-350	0	18	1,072	1,677
Waxes .....	0	2,074	53	292	0	0	-731	0	295	1,393	5,857
Petroleum Coke .....	0	212	49	10	0	0	-7	0	10	255	446
Asphalt .....	0	5,068	0	-127	0	0	0	0	2,653	2,288	929
Road Oil .....	0	2,595	0	-240	0	0	-533	0	1	1,821	3,317
Still Gas .....	0	0	0	1	0	0	0	0	0	1	0
Miscellaneous Products .....	0	7,449	0	0	0	0	0	0	0	0	0
	137	1,755	3	844	0	0	-648	0	16	7,449	1,009
Total .....	167,192	190,007	47,072	19,509	-24,423	-28	-98,508	180,886	11,862	108,073	712,116

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(9) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 9. PAD District IV Supply and Disposition of Crude Oil and Petroleum Products, December 1982  
(Thousands of Barrels)

Commodity	Supply						Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 17,473	0	1,774	-551	-4,841	0	0	13,855	0	0	13,436
Natural Gas Plant Liquids and LRGs	2,390	87	647	84	0	0	-290	630	(S)	2,288	1,267
Liquefied Petroleum Gases	905	87	571	25	0	0	64	502	(S)	1,150	994
Ethane	29	0	0	-1	0	0	0	0	0	28	1
Other Products <sup>3</sup>	1,456	0	76	60	0	0	-354	128	0	1,110	272
Other Liquids	75	0	0	-540	0	0	0	-766	0	301	5,159
Other Hydrocarbons and Alcohol	75	0	0	0	0	0	0	75	0	0	0
Unfinished Oils	0	0	0	47	0	0	0	-486	0	533	2,686
Motor Gasoline Blending Components	0	0	0	-587	0	0	0	-355	0	-232	2,473
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0
Finished Petroleum Products	67	13,799	9	-1,869	0	0	289	0	2	12,293	14,171
Finished Motor Gasoline	51	7,288	0	-809	0	0	168	0	0	6,697	6,086
Finished Leaded Motor Gasoline	45	4,850	0	-678	0	0	-161	0	0	4,056	3,954
Finished Unleaded Motor Gasoline	6	2,438	0	-132	0	0	329	0	0	2,641	2,131
Gasohol	0	0	0	0	0	0	0	0	0	0	1
Finished Aviation Gasoline	0	26	0	-12	0	0	23	0	0	37	67
Naphtha-Type Jet Fuel	0	418	0	-3	0	0	-170	0	0	245	349
Kerosene-Type Jet Fuel	0	487	0	-15	0	0	656	0	0	1,128	638
Kerosene	0	90	0	-8	0	0	0	0	0	82	42
Distillate Fuel Oil	0	3,651	(S)	-515	0	0	-388	0	0	2,748	4,024
Residual Fuel Oil	0	431	9	-121	0	0	0	0	0	319	634
Naphtha and Other Oils for Petro. Feed.	0	0	0	0	0	0	0	0	(S)	(S)	0
Special Naphthas	0	4	(S)	-1	0	0	0	0	(S)	3	9
Lubricants	0	33	0	-15	0	0	0	0	(S)	18	84
Waxes	0	13	0	0	0	0	0	0	0	10	13
Petroleum Coke	0	327	0	-63	0	0	0	0	(S)	264	776
Asphalt	0	489	0	-307	0	0	0	0	1	181	1,451
Road Oil	0	0	0	0	0	0	0	0	0	0	0
Still Gas	0	517	0	0	0	0	0	0	0	517	0
Miscellaneous Products	17	25	0	1	0	0	0	0	(S)	42	1
Total	20,005	13,886	2,430	-2,876	-4,841	0	-1	13,719	3	14,882	34,033

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Total equals refinery fuel use and loss.

<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(S) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 10. PAD District V Supply and Disposition of Crude Oil and Petroleum Products, December 1982  
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Used Directly and Losses <sup>2</sup>	Net Receipts	Disposition			Ending Stocks
								Refinery Inputs	Exports	Products Supplied	
<b>Crude Oil (including lease condensate)</b>	<b>E 86,187</b>	<b>0</b>	<b>6,071</b>	<b>1,921</b>	<b>-6,701</b>	<b>-1,635</b>	<b>-16,821</b>	<b>63,088</b>	<b>5,934</b>	<b>0</b>	<b>80,554</b>
<b>Natural Gas Plant Liquids and LRGs</b>	<b>969</b>	<b>817</b>	<b>673</b>	<b>290</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,360</b>	<b>160</b>	<b>1,229</b>	<b>1,771</b>
Liquefied Petroleum Gases	626	800	673	291	0	0	0	1,128	160	1,102	1,714
Ethane	0	17	0	0	0	0	0	0	0	17	0
Other Products <sup>3</sup>	342	0	0	-1	0	0	0	232	0	110	57
<b>Other Liquids</b>	<b>435</b>	<b>0</b>	<b>436</b>	<b>844</b>	<b>0</b>	<b>0</b>	<b>346</b>	<b>2,570</b>	<b>0</b>	<b>-509</b>	<b>32,628</b>
Other Hydrocarbons and Alcohol	435	0	0	-5	0	0	0	430	0	0	5
Unfinished Oils	0	0	7	269	0	0	346	1,643	0	-1,021	24,942
Motor Gasoline Blending Components	0	0	429	564	0	0	0	487	0	506	7,659
Aviation Gasoline Blending Components	0	0	0	16	0	0	0	10	0	6	22
<b>Finished Petroleum Products</b>	<b>0</b>	<b>69,441</b>	<b>1,653</b>	<b>-3,541</b>	<b>0</b>	<b>1,612</b>	<b>3,500</b>	<b>0</b>	<b>6,474</b>	<b>66,192</b>	<b>55,788</b>
Finished Motor Gasoline	0	30,939	920	-1,222	0	0	1,730	0	15	32,352	20,212
Finished Leaded Motor Gasoline	0	13,415	663	-297	0	0	1,071	0	15	14,837	9,683
Finished Unleaded Motor Gasoline	0	17,441	257	-924	0	0	659	0	0	17,433	10,522
Gasohol	0	83	0	-1	0	0	0	0	0	82	7
Finished Aviation Gasoline	0	99	0	52	0	0	0	0	0	151	614
Naphtha-Type Jet Fuel	0	1,333	0	233	0	0	326	0	1	1,891	1,212
Kerosene-Type Jet Fuel	0	6,559	0	298	0	0	271	0	26	7,102	5,256
Kerosene	0	176	1	-23	0	0	0	0	( <sup>4</sup> )	153	146
Distillate Fuel Oil	0	11,057	97	-1,452	0	297	728	0	495	10,232	12,729
Residual Fuel Oil	0	9,898	618	-899	0	1,315	377	0	2,584	8,726	9,311
Naphtha and Other Oils for Petro. Feed	0	945	1	-117	0	0	0	0	6	823	815
Special Naphthas	0	75	10	-69	0	0	0	0	1	15	265
Lubricants	0	250	( <sup>4</sup> )	-32	0	0	88	0	63	243	1,223
Waxes	0	70	6	-12	0	0	0	0	6	58	57
Petroleum Coke	0	3,459	0	-270	0	0	0	0	0	-84	2,241
Asphalt	0	909	0	-33	0	0	0	0	3,273	875	1,964
Road Oil	0	12	0	1	0	0	0	0	1	13	32
Still Gas	0	3,508	0	0	0	0	0	0	0	3,508	0
Miscellaneous Products	0	152	0	4	0	0	-20	0	3	133	311
<b>Total</b>	<b>87,591</b>	<b>70,258</b>	<b>8,832</b>	<b>-486</b>	<b>-6,701</b>	<b>-23</b>	<b>-12,975</b>	<b>67,018</b>	<b>12,568</b>	<b>66,911</b>	<b>170,741</b>

<sup>1</sup> Unaccounted for crude oil is a balancing item.<sup>2</sup> Total equals refinery fuel use and loss.<sup>3</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.<sup>4</sup> Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 11. Production of Crude Oil (Including Lease Condensate) by PAD District and State, for the Most Current Month,<sup>1</sup> October 1982  
(Thousands of Barrels)

PAD District and State	Production	
	Total	Daily Average
<b>PAD District I</b>		
Florida	2,049	86
New York	E 71	2
Pennsylvania	E 317	10
Virginia	0	0
West Virginia	E 295	10
<b>Total</b>	<b>E 2,732</b>	<b>88</b>
<b>PAD District II</b>		
Illinois	2,590	84
Indiana	E 401	13
Kansas	5,943	192
Kentucky	E 556	18
Michigan	2,585	83
Missouri	E 19	1
Nebraska	572	18
North Dakota	4,170	135
Ohio	E 1,151	37
Oklahoma	13,533	437
South Dakota	92	3
Tennessee	103	3
<b>Total</b>	<b>E 31,715</b>	<b>1,023</b>
<b>PAD District III</b>		
Alabama	1,498	48
Arkansas	E 1,601	52
Louisiana		
Gulf Coast	36,674	1,183
Rest Of State	3,037	98
<b>Total Louisiana</b>	<b>39,711</b>	<b>1,281</b>
Mississippi	2,775	90
New Mexico		
Northwestern	553	18
Southeastern	5,652	182
<b>Total New Mexico</b>	<b>6,205</b>	<b>200</b>
Texas		
TRRC District 01	2,128	69
TRRC District 02	3,439	111
TRRC District 03	11,496	371
TRRC District 04	2,968	76
TRRC District 05	660	21
TRRC District 06, excluding East Texas	3,532	114
TRRC District 07B	2,798	90
TRRC District 07C	2,866	92
TRRC District 08	19,567	631
TRRC District 08A	19,873	641
TRRC District 09	3,252	105
TRRC District 10	1,698	55
East Texas	4,437	143
<b>Total Texas</b>	<b>78,114</b>	<b>2,520</b>
<b>Total</b>	<b>E 129,904</b>	<b>4,190</b>
<b>PAD District IV</b>		
Colorado	2,562	83
Montana	2,585	83
Utah	E 1,949	63
Wyoming	E 10,192	329
<b>Total</b>	<b>E 17,288</b>	<b>558</b>
<b>PAD District V</b>		
Alaska		
South Alaska	2,316	75
North Slope	50,565	1,631
<b>Total Alaska</b>	<b>52,881</b>	<b>1,706</b>
Arizona	26	1
California		
Central Coastal	6,560	212
East Central	21,208	694
North	17	1
South	6,810	220
<b>Total California</b>	<b>34,595</b>	<b>1,116</b>
Nevada	51	2
<b>Total</b>	<b>87,553</b>	<b>2,824</b>
<b>United States Total</b>	<b>E 269,192</b>	<b>8,694</b>

<sup>1</sup> Includes offshore production.

Sources: See Explanatory Notes on Data Collection and Estimation.

E Estimated.

Table 12. Onshore Production of Crude Oil (Including Lease Condensate) By State, for the Most Current Month,<sup>1</sup> October 1982 (Thousands of Barrels)

State	Offshore Production	
	Total	Daily Average
Alaska <sup>2</sup>	2,039	66
California		
Federal	2,530	82
State	3,233	104
California, Total	5,763	186
Louisiana		
Federal	23,899	771
State	2,075	67
Louisiana, Total	25,974	838
Texas		
Federal	1,553	50
State	142	5
Texas, Total	1,695	55
<b>United States Total</b>	<b>35,471</b>	<b>1,144</b>

<sup>1</sup> These production data are included in Table 11.

<sup>2</sup> All offshore production within State boundaries.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 13. Production of Lease Condensate by State, for the Most Current Month,<sup>1</sup> October 1982 (Thousands of Barrels)

State	Lease Condensate Production	
	Total	Daily Average
Alabama	844	27
California	11	(s)
Louisiana	5,261	170
Mississippi	189	6
New Mexico	365	12
Oklahoma	882	28
Texas	3,602	116
<b>Total</b>	<b>11,148</b>	<b>360</b>

<sup>1</sup> These production data are included in Table 11. Small amounts of lease condensate are known to be produced in states other than those listed, however, statistics on this production are not available.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 14. Natural Gas Processing Plant Production of Petroleum Products by PAD District,<sup>1</sup> December 1982**  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		
Natural Gas Plant Liquids	580	450	1,031	1	1,934	424	7,453	9,813	19,994	3,020	8,767	787	3,670	36,238	969	50,440
Isopentane	0	0	0	0	0	0	400	400	410	43	41	0	0	493	2	895
Natural Gasoline	79	34	113	0	59	88	1,122	1,269	1,615	2,184	1,226	114	292	5,432	349	7,548
Unfractionated Stream	36	86	123	1	886	81	-3,940	-2,972	10,183	-13,111	1,404	167	2,343	985	-6	-821
Plant Condensate	0	0	0	0	42	0	29	70	256	501	19	-85	2	694	19	782
Liquefied Petroleum Gases and Ethane	465	330	795	0	947	256	9,843	11,046	7,530	13,402	6,077	592	1,033	28,634	934	42,035
Ethane	150	169	319	0	403	0	2,350	2,753	909	2,994	2,085	46	77	6,110	29	9,211
Propane	189	108	297	0	384	157	3,262	3,803	2,711	3,627	2,060	177	468	9,044	576	14,090
Butane	104	35	139	0	68	88	1,337	1,493	1,225	1,922	718	208	256	4,328	320	6,477
Butane-Propane Mixtures	0	0	0	0	6	0	0	6	67	16	(s)	14	0	97	0	144
Ethane-Propane Mixtures	0	0	0	0	49	0	2,342	2,391	2,042	3,649	627	147	148	6,467	0	8,858
Isobutane	22	18	40	0	37	11	552	600	576	1,195	587	0	84	2,589	9	3,256
Finished Motor Gasoline	33	0	33	0	0	0	0	0	0	0	0	0	0	0	51	84
Finished Leaded Motor Gasoline	24	0	24	0	0	0	0	0	0	0	0	0	0	0	45	69
Finished Unleaded Motor Gasoline	9	0	9	0	0	0	0	0	0	0	0	0	0	0	6	14
Gasohol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel	0	0	0	0	0	0	0	0	1	0	0	0	0	54	0	54
Kerosene-Type Jet Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene	0	0	0	0	0	0	0	0	0	0	0	(s)	0	(s)	0	(s)
Distillate Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2
Special Naphthas	0	0	0	0	0	0	2	2	(s)	0	0	0	0	(s)	0	2
Miscellaneous Products	0	0	0	0	0	0	0	0	43	0	0	0	0	43	0	43
Total Production	613	450	1,064	1	1,935	424	7,464	9,825	20,207	3,022	8,771	801	3,675	36,475	2,457	50,790

<sup>1</sup> Production represents quantity of natural gas processing plant output less input to fractionating facilities.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 15. Refinery Input of Crude Oil and Petroleum Products by PAD District, December 1982  
(Thousands of Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II				PAD District III				Total		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okl., Kans., Mo.	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No La., Ark.	New Mexico	Total	
Crude Oil (including lease condensate) .....	32,271	2,827	35,098	1,723	52,920	7,994	21,546	14,164	79,021	60,538	4,667	2,333	160,723	35,947
Natural Gas Plant Liquids														
Natural Gasoline and Isopentane	17	0	17	0	407	85	794	1,286	1,862	171	102	93	3,007	4,635
Unfractionated Stream .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate .....	0	0	0	0	126	0	12	138	51	678	220	1	950	1,123
LPG and Ethane .....	250	43	293	179	2,851	480	1,307	4,817	749	2,175	129	64	5,519	12,259
Ethane .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propane .....	0	0	0	0	64	0	0	64	0	34	0	0	34	34
Normal Butane .....	195	0	195	101	1,347	359	812	2,619	995	1,255	38	16	48	115
Other Butanes .....	0	0	0	0	537	57	49	643	131	77	0	0	288	6,069
Butane-Propane Mixtures .....	0	0	0	0	4	0	0	4	72	48	0	25	145	1,579
Ethane-Propane Mixtures .....	0	0	0	0	0	0	0	0	0	0	0	0	0	157
Isobutane .....	55	43	98	78	899	64	446	1,487	332	1,028	91	23	2,414	4,305
Other Liquids														
Other Hydrocarbons .....	68	0	68	0	180	0	14	194	17	445	196	0	658	1,414
Alcohol .....	0	16	16	0	0	0	0	0	0	0	0	0	0	27
Unfinished Oil (net) .....	4,659	63	4,722	15	1,484	-37	1,199	2,661	386	3,798	264	106	7,810	16,350
Motor Gasoline Blending														
Components (net) .....	-12	10	-2	2	1,878	-93	-183	1,604	-642	525	-39	-45	2,401	4,135
Aviation Gasoline Blending														
Components (net) .....	-5	0	-5	0	-43	0	-2	-45	-76	-45	0	0	-182	-222
Total input to Refineries .....	37,248	2,959	40,207	1,919	59,803	8,429	24,687	94,838	15,428	88,459	5,343	2,552	180,886	396,668
Crude Oil Distillation														
Gross Input (daily average) .....	1,069	91	1,160	62	1,749	271	704	2,786	494	2,671	160	85	5,437	11,900
Operable Capacity (daily average) .....	1,644	117	1,762	66	2,339	295	858	3,559	618	4,192	267	107	7,939	17,008
Operating Ratio (percent) <sup>1</sup> .....	65.0	77.3	65.8	93.7	74.8	91.7	82.0	78.3	80.0	63.7	60.1	79.8	68.5	70.0
Crude Oil Qualities														
Sulfur Content, Weighted Average (percent) .....	.91	.28	.86	.47	.93	1.56	.56	.89	93	.80	1.59	.35	.86	.89
API Gravity, Weighted Average .....	31.41	40.40	32.14	38.00	35.52	31.23	37.15	35.58	34.80	33.94	32.15	39.55	34.68	33.20

<sup>1</sup> Represents gross input divided by operable capacity.  
Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 16. Refinery Production of Petroleum Products by PAD District, December 1982  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.
Liquefied Petroleum Gases and Ethane	1,370	13	1,383	42	1,560	291	610	2,503	251	2,099	1,074	75	76	3,575	87	817
For Petrochemical Feedstock Use	296	0	296	0	199	0	75	274	17	1,189	252	14	0	1,472	16	164
For Other Uses	1,074	13	1,087	42	1,361	291	535	2,229	234	910	822	61	76	2,103	71	653
Ethane	0	0	0	0	23	0	0	23	0	5	11	0	0	16	0	17
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
For Other Uses	0	0	0	0	23	0	0	23	0	5	11	0	0	16	0	16
Propane	1,193	13	1,206	42	1,517	287	623	2,469	258	2,115	1,367	50	47	3,837	194	923
For Petrochemical Feedstock Use	249	0	249	0	199	0	75	274	0	887	157	0	0	1,044	16	154
For Other Uses	944	13	957	42	1,318	287	548	2,195	258	1,228	1,210	50	47	2,793	178	769
Butane	177	0	177	0	20	4	-13	11	-24	21	-266	23	6	-240	-18	-89
For Petrochemical Feedstock Use	47	0	47	0	0	0	0	0	0	297	61	14	0	372	0	429
For Other Uses	130	0	130	0	20	4	-13	11	-24	-276	-327	9	6	-612	-18	-588
Butane-Propane Mixtures	0	0	0	0	0	0	0	0	0	-42	-38	2	23	-55	-89	-34
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23
For Other Uses	0	0	0	0	0	0	0	0	0	-42	-61	2	23	-78	-89	-34
Isobutane for Petro. Feed. Use	0	0	0	0	0	0	0	0	17	0	0	0	0	17	0	17
Finished Motor Gasoline	19,320	1,156	20,476	1,110	35,203	4,402	14,026	54,741	8,192	43,431	34,568	1,957	1,067	89,215	7,288	30,939
Finished Leaded Motor Gasoline	7,424	589	8,013	549	16,348	2,348	7,922	27,167	4,158	17,635	16,437	1,261	650	40,141	4,850	13,415
Finished Unleaded Motor Gasoline	11,896	567	12,463	561	18,813	2,054	6,099	27,527	4,033	25,796	18,131	696	417	49,073	2,438	17,441
Gasohol	0	0	0	0	42	0	5	47	1	0	0	0	0	1	0	83
Finished Aviation Gasoline	0	0	0	0	35	0	19	54	5	150	6	0	0	161	26	99
Naphtha-Type Jet Fuel	418	38	456	61	382	77	404	924	730	1,407	468	141	324	3,070	418	1,333
Kerosene-Type Jet Fuel	689	0	689	101	2,961	237	561	3,860	724	4,030	6,830	16	21	11,621	487	6,559
Kerosene	261	98	359	0	733	87	47	867	50	1,412	1,437	-2	21	2,918	90	176
Distillate Fuel Oil	8,297	707	9,004	364	10,988	2,322	6,408	20,082	3,448	20,182	12,511	1,493	866	38,500	3,651	11,057
Distillate Fuel Oil Less No. 4	8,297	704	9,001	364	10,939	2,322	6,408	20,033	3,409	20,356	12,494	1,424	851	38,334	3,618	10,961
No. 4 Fuel Oil	0	3	3	0	49	0	0	49	39	-174	17	69	215	166	33	96
Residual Fuel Oil	4,475	308	4,784	143	2,648	341	441	3,573	589	5,551	5,312	456	82	11,990	431	9,898
Naphtha < 400 Deg. For Petro. Feed. Use	412	0	412	0	91	0	116	207	453	2,697	365	1	0	3,516	0	155
Other Oils > 400 Deg. For Petro. Feed. Use	7	0	7	0	1,437	0	1,438	-61	2,780	2,725	45	0	0	5,489	0	790
Special Naphthas	12	11	23	0	195	0	129	324	130	491	29	149	0	799	4	75
Lubricants	85	372	457	0	359	0	378	737	22	1,272	580	200	0	2,074	33	250
Bright Stock	13	137	150	0	11	0	36	47	0	141	216	0	0	357	5	12
Neutral	0	221	221	0	275	0	269	544	0	644	236	87	0	867	28	178
Other Grades	72	14	86	0	73	0	73	146	22	487	128	113	0	750	0	60
Wax	17	90	107	0	8	0	38	46	8	109	62	33	0	212	13	70
Microcrystalline	1	17	18	0	0	0	1	1	8	9	2	33	0	52	0	71
Crystalline-Fully Refined	10	28	38	0	6	0	28	34	0	64	60	0	0	124	13	47
Crystalline-Other	6	45	51	0	2	0	9	11	0	36	0	0	0	36	0	23
Petroleum Coke	1,160	20	1,180	29	2,046	330	913	3,318	294	2,802	1,805	157	10	5,068	327	3,459
Marketable	325	0	325	0	1,192	210	629	2,031	67	1,335	1,032	132	0	2,566	171	2,618
Catalyst	835	20	855	29	854	120	284	1,287	227	1,467	773	25	10	2,502	156	841
Asphalt	1,173	20	1,193	60	1,232	530	492	2,314	437	399	1,188	502	69	2,595	489	909
Road Oil	0	0	0	0	-3	0	0	-3	0	0	0	0	0	0	0	0
Sill Gas	1,648	129	1,777	69	2,281	262	962	3,574	427	4,446	2,343	186	47	7,449	517	3,508
For Petrochemical Feedstock Use	20	0	20	0	1	0	0	1	6	609	79	0	0	694	22	130
For Other Uses	1,628	129	1,757	69	2,280	262	962	3,573	421	3,837	2,264	186	47	6,755	495	3,378
Miscellaneous Products	441	22	463	3	65	24	54	146	118	716	900	21	0	1,755	25	152
Total Output	38,785	2,385	42,770	1,982	62,221	8,903	25,599	98,705	15,817	93,974	72,203	5,430	2,583	190,007	13,886	70,258
Processing Gain(-) or Loss(+)	-2,537	-26	-2,563	-63	-2,418	-474	-912	-3,867	-389	-5,515	-3,099	-87	-31	-9,121	-167	-3,240

1 Represents the arithmetic difference between input and output.  
Notes: Total may not equal sum of components due to independent rounding.  
See Explanatory Notes on negative product yield.  
Source: See Explanatory Notes on Data Collection and Estimation.



Table 17. Percent Refinery Yield of Petroleum Products by PAD District,<sup>1</sup> December 1982

Commodity	PAD District I			PAD District II					PAD District III					PAD		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Dist. IV Rocky Mt.		Dist. V West Coast
Finished Motor Gasoline <sup>2</sup>	51.4	37.6	50.4	53.5	54.7	49.4	53.1	53.8	49.7	45.6	45.8	31.3	39.1	45.5	51.9	44.3	48.0
Finished Aviation Gasoline <sup>3</sup>	(s)	.0	(s)	.0	.1	.0	.1	.1	.6	.2	.1	.0	.0	.2	.2	.1	.2
Liquefied Refinery Gases & Ethane	3.7	.4	3.5	2.4	2.9	3.7	2.7	2.9	1.7	2.5	1.7	1.5	3.1	2.1	.7	1.3	2.2
Naphtha-Type Jet Fuel	1.1	1.3	1.1	3.5	.7	1.0	1.8	1.1	5.0	1.7	.7	2.9	13.3	1.8	3.1	2.1	1.7
Kerosene-Type Jet Fuel	1.9	0	1.7	5.8	5.4	3.0	2.5	4.4	5.0	4.9	10.7	.3	9	6.9	3.6	10.1	6.2
Kerosene	.7	3.4	.9	0	1.3	1.1	.2	1.0	.3	1.7	2.3	(s)	9	1.7	7	3	1.2
Distillate Fuel Oil	22.5	24.5	22.6	20.9	20.2	29.2	28.2	23.1	23.7	24.4	19.6	30.3	35.5	22.8	27.3	17.1	22.0
Residual Fuel Oil	12.1	10.7	12.0	8.2	4.9	4.3	1.9	4.1	4.0	6.7	8.3	9.2	3.4	7.1	3.2	15.3	8.2
Naphtha < 400 Deg. F. Petro. Feed. Use	1.1	0	1.0	0	.2	0	.5	.2	3.1	3.3	.6	(s)	0	2.1	0	.2	1.1
Other Oils > 400 Deg F. Petro. Feed. Use	(s)	0	(s)	0	2.6	0	(s)	1.7	-.4	3.4	4.3	.9	0	3.3	0	1.2	2.1
Special Naphthas	(s)	.4	.1	0	.4	0	.6	.4	.9	.6	(s)	3.0	0	.5	(s)	.1	.3
Lubricants	.2	12.9	1.1	0	.7	0	1.7	.8	.2	1.5	9	4.1	0	1.2	.2	4	1.0
Wax	(s)	3.1	.3	0	(s)	0	.2	.1	1	.1	.1	.7	0	1	.1	1	.1
Petroleum Coke	3.1	.7	3.0	1.7	3.8	4.1	4.0	3.8	2.0	3.4	2.8	3.2	.4	3.0	2.4	5.3	3.6
Asphalt	3.2	.7	3.0	3.5	2.3	6.7	2.2	2.7	3.0	.5	1.9	10.2	2.8	1.5	3.7	1.4	2.0
Road Oil	0	0	0	0	(s)	0	0	(s)	0	0	0	.0	0	0	0	(s)	(s)
Still Gas for Petro. Feed. Use	1	0	.1	0	(s)	0	0	(s)	(s)	.7	1	0	0	4	.2	2	2
Still Gas for Other Uses	4.4	4.5	4.4	4.0	4.2	3.3	4.2	4.1	2.9	4.6	3.5	3.8	1.9	4.0	3.7	5.2	4.3
Miscellaneous Products	1.2	.8	1.2	.2	.1	3	.2	2	.8	.9	1.4	.4	0	1.0	.2	2	7
Processing Gain(-) or Loss(+) <sup>4</sup>	-6.9	-9	-6.4	-3.6	-4.4	-6.0	-4.0	-4.5	-2.7	-6.7	-4.9	-1.8	-1.3	-5.4	-1.2	-5.0	-5.1

<sup>1</sup> Based on crude oil input and net reruns of unfinished oils.

<sup>2</sup> Based on total finished motor gasoline output plus net output of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and alcohol.

<sup>3</sup> Based on finished aviation gasoline output plus net output of aviation gasoline blending components

<sup>4</sup> Represents the arithmetic difference between Input and Production

(s) Less than 0.05 percent.

Note: Total may not equal sum of components due to independent rounding.

See Explanatory Notes on negative product yields.

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 18. Refinery Receipts of Crude Oil by PAD District, December 1982**  
(Thousands of Barrels)

Method	PAD District I			PAD District II					PAD District III					PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.		Minn., Wisc., Daks.		Okla., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La. Ark.	New Mexico	Total		Rocky Mt.	Dist. V
Pipeline																		
Domestic	0	2,115	2,115	1,547	35,988	3,926	20,030	61,491	12,241	46,109	32,097	3,499	2,025	95,971	11,427	28,902	199,906	
Foreign	0	0	0	152	14,419	3,943	1,111	19,625	966	7,062	5,012	249	0	13,289	1,722	736	35,372	
Tanker																		
Domestic	4,531	0	4,531	0	0	0	0	0	0	4,568	4,489	0	0	9,057	0	25,129	38,717	
Foreign	22,038	0	22,038	0	803	0	0	803	0	11,714	12,507	0	0	24,221	0	5,877	52,939	
Barge																		
Domestic	0	79	79	0	1,129	0	0	1,129	0	5,188	4,390	30	0	9,608	0	717	11,533	
Foreign	5,126	0	5,126	0	680	0	0	680	0	45	70	113	0	228	0	0	6,034	
Tank Cars																		
Domestic	77	336	413	0	0	0	0	0	0	0	0	0	0	17	0	30	460	
Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trucks																		
Domestic	0	316	316	0	364	34	905	1,303	688	173	459	892	325	2,537	857	1,522	6,535	
Foreign	0	0	0	0	0	0	0	0	182	0	0	0	0	182	47	0	229	
Total																		
Domestic	4,608	2,846	7,454	1,547	37,481	3,960	20,995	63,923	12,929	56,098	41,435	4,438	2,350	117,190	12,284	58,300	257,151	
Foreign	27,164	0	27,164	152	15,902	3,943	1,111	21,108	1,148	18,821	17,589	362	0	37,920	1,769	6,613	94,574	

**Note:** Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 19. Fuels Consumed at Refineries by PAD District, December 1982  
(Thousands of Barrels, Except Where Noted)**

Commodity	PAD District I			PAD District II				PAD District III			PAD District IV			United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Calif.	No. La., Ark.	New Mexico		Total	Rocky Mt.	Dist. V
Crude Oil (including lease condensate)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Liquefied Petroleum Gases <sup>1</sup>	26	(s)	27	3	64	26	19	111	(s)	4	177	0	3	184	5	124	451
Unrefined Oils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	35	17	52	0	5	0	3	8	7	0	1	0	(s)	0	8	64	131
Residual Fuel Oil	584	73	657	23	407	55	4	489	3	159	113	18	0	293	104	334	1,876
Marketable Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	75	90
Catalyst Petroleum Coke	836	20	856	28	808	69	258	1,164	226	1,412	773	25	10	2,446	156	840	5,462
Sulfur Gas	1,376	129	1,505	69	2,202	261	882	3,414	410	3,509	1,895	181	47	6,042	483	3,098	14,541
Other Fuels 2	6	0	6	0	84	0	0	84	0	6	0	0	0	0	6	2	72
Natural Gas (million cubic feet)	1,831	272	2,103	44	3,080	205	3,316	6,645	3,058	23,573	9,323	840	166	36,960	1,235	7,184	54,127
Coal (thousand short tons)	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Purchased Electricity (million kWh)	209	103	313	15	373	49	534	1,071	76	337	431	23	22	890	170	572	3,015
Purchased Steam (million pounds)	685	9	674	0	100	0	0	100	0	0	639	0	0	639	0	834	2,247

† Includes liquefied refinery gases

2 Includes small quantities of other petroleum products (e.g., unfinished oils, kerosene, etc.) consumed at refineries

(s) Less than 500 barrels except where noted.

**Note:** Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 20. Imports of Crude Oil and Petroleum Products by PAD District, December 1982  
(Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1 2</sup>	23,953	19,643	40,197	1,774	6,071	91,638
Natural Gas Liquids						
Natural Gasoline and Isopentane	558	6,273	0	647	673	8,151
Plant Condensate	1	0	0	0	0	1
Liquefied Petroleum Gases and Ethane	68	0	0	76	0	144
Ethane	489	6,273	0	571	673	8,006
Propane	0	1,556	0	0	0	1,556
Butane	304	862	0	368	98	1,632
Butane-Propane Mixtures	186	1,222	0	203	575	2,185
Ethane-Propane Mixtures	0	0	0	0	0	0
Other Liquids <sup>1</sup>	0	2,632	0	0	0	2,632
Other Liquids <sup>1</sup>						
Unfinished Oils <sup>1</sup>	2,803	388	4,316	0	436	7,742
Motor Gasoline Blending Components	2,291	253	4,122	0	7	6,672
Motor Gasoline	312	134	194	0	429	1,070
Finished Petroleum Products						
Finished Motor Gasoline	29,232	446	2,560	9	1,653	33,899
Finished Leaded Motor Gasoline	4,597	6	( <sup>3</sup> )	0	920	5,523
Finished Unleaded Motor Gasoline	3,291	4	( <sup>3</sup> )	0	663	3,957
Finished Aviation Gasoline	1,307	2	0	0	257	1,566
Naphtha-Type Jet Fuel	( <sup>3</sup> )	0	0	0	0	( <sup>3</sup> )
Kerosene-Type Jet Fuel	0	0	0	0	0	0
Bonded Aircraft Fuel	225	0	0	0	0	225
Other	0	0	0	0	0	0
Kerosene	225	0	0	0	0	225
Distillate Fuel Oil	476	0	0	0	0	477
Bonded ships bunkers	3,260	1	8	( <sup>3</sup> )	97	3,368
For military offshore use	0	0	0	0	0	0
No. 2 fuel oil	0	0	0	0	0	0
No. 4 fuel oil	3,257	1	8	( <sup>3</sup> )	97	3,363
Residual Fuel Oil	3	0	0	0	0	3
Bonded ships bunkers	20,311	305	1,926	9	618	23,170
For military offshore use	0	0	0	0	0	0
Other	0	0	0	0	0	0
Naphtha < 400 Deg. for Petro. Feed Use	20,311	305	1,926	9	618	23,170
Other Oils > 400 Deg. for Petro. Feed Use	2	4	0	0	1	6
Special Naphthas	0	0	0	0	0	0
Lubricants	62	112	520	( <sup>3</sup> )	10	704
Wax	188	14	53	0	( <sup>3</sup> )	255
Asphalt	52	3	49	0	6	110
Miscellaneous Products	58	1	0	0	0	59
( <sup>3</sup> )	( <sup>3</sup> )	0	3	0	0	3
Total Imports	56,345	26,750	47,072	2,430	8,832	141,490

<sup>1</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>2</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(<sup>3</sup>) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, December 1982  
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
All PAD Districts														
<b>Arab OPEC</b>														
Algeria .....	2,639	0	0	0	0	0	0	0	1,728	0	0	1,728	4,367	141
Kuwait .....	354	0	182	0	0	0	0	0	0	0	0	182	535	17
Saudi Arabia .....	7,213	127	0	0	0	0	0	0	0	0	0	127	7,340	237
United Arab Emirates .....	0	0	0	368	0	0	0	0	0	0	0	368	368	12
Subtotal Arab OPEC .....	10,206	127	182	368	0	0	0	0	1,728	0	0	2,405	12,611	407
<b>Other OPEC</b>														
Ecuador .....	0	0	0	0	0	0	0	0	316	0	0	316	316	10
Gabon .....	1,412	0	0	0	0	0	0	0	0	0	0	0	1,412	46
Indonesia .....	7,522	0	0	0	152	0	0	39	504	0	0	695	8,217	265
Iran .....	2,715	0	0	0	0	0	0	0	0	0	0	0	2,715	88
Nigeria .....	13,520	0	0	0	0	0	0	0	344	0	0	344	13,864	447
Venezuela .....	6,245	0	1,499	150	0	0	0	0	4,069	340	57	5,115	12,360	399
Subtotal Other OPEC .....	31,415	0	1,499	150	152	0	0	39	5,233	340	57	7,470	38,884	1,254
<b>Other</b>														
Angola .....	0	0	0	0	0	0	0	0	389	0	0	389	389	13
Australia .....	0	26	0	0	0	0	0	0	254	0	0	280	280	9
Bahamas .....	0	0	1,397	0	0	0	0	232	1,121	0	0	2,750	2,750	89
Brazil .....	381	0	0	0	259	0	0	0	361	0	0	620	1,001	32
Brunei .....	217	0	0	0	0	0	0	0	0	0	0	0	217	7
Canada .....	7,669	7,846	262	240	31	0	9	429	491	184	224	9,717	17,385	561
Congo .....	0	0	0	0	0	0	0	0	174	0	0	174	174	6
Egypt .....	518	0	0	312	0	0	0	0	0	0	0	312	831	27
France .....	0	0	0	0	0	0	0	0	0	8	16	24	24	1
Malaysia .....	0	0	0	0	0	0	0	0	621	0	0	621	621	20
Mexico .....	20,889	0	0	0	0	0	0	17	0	0	7	25	20,913	675
Netherlands .....	0	0	0	0	1,053	0	0	240	217	22	0	1,532	1,532	49
Netherlands Antilles .....	0	0	535	0	121	0	0	3	4,689	0	39	5,387	5,387	174
Norway .....	1,365	0	0	0	0	0	0	0	0	0	0	0	1,365	44
Oman .....	633	0	0	0	0	0	0	0	0	0	0	0	633	20
People's Republic of China .....	0	0	0	0	699	0	0	25	35	0	0	759	759	24
Peru .....	378	0	0	0	0	0	0	0	784	0	0	784	1,162	37
Puerto Rico .....	0	0	444	0	475	0	0	458	0	0	107	1,484	1,484	48
Spain .....	0	0	0	0	0	0	0	0	504	0	3	507	507	16
Trinidad and Tobago .....	2,845	0	0	0	0	0	0	0	495	0	23	518	3,163	102
United Kingdom .....	12,860	7	0	0	386	0	0	0	289	0	26	708	13,567	438
Virgin Islands .....	0	0	1,699	0	2,046	225	468	1,900	3,936	139	0	10,411	10,411	336
Zaire .....	299	0	0	0	0	0	0	0	0	0	0	0	299	10
Other Western Hemisphere .....	143	0	0	0	0	0	0	0	556	4	0	560	703	23
Other Eastern Hemisphere .....	2,021	(5)	655	0	300	0	0	24	1,294	6	79	2,359	4,380	141
Subtotal Other .....	50,017	7,879	4,992	552	5,371	225	477	3,327	15,208	384	522	39,917	89,934	2,901
<b>Total Imports .....</b>	<b>91,638</b>	<b>8,006</b>	<b>6,672</b>	<b>1,070</b>	<b>5,523</b>	<b>225</b>	<b>477</b>	<b>3,366</b>	<b>23,170</b>	<b>704</b>	<b>579</b>	<b>49,792</b>	<b>141,430</b>	<b>4,562</b>

See footnotes at end of table.

(continued)  
Imports of Crude Oil and Petroleum Products by Source and PAD District, December 1982  
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill Fuel Oil	Residual Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
PAD District I														
<b>Arab OPEC</b>														
Algeria	1,060	0	0	0	0	0	0	0	1,728	0	0	1,728	2,788	90
Kuwait	354	0	182	0	0	0	0	0	0	0	0	182	535	17
Saudi Arabia	3,457	127	0	0	0	0	0	0	0	0	0	127	3,595	116
Subtotal Arab OPEC	4,881	127	182	0	0	0	0	0	1,728	0	0	2,037	6,918	223
<b>Other OPEC</b>														
Ecuador	0	0	0	0	0	0	0	0	316	0	0	316	316	10
Gabon	530	0	0	0	0	0	0	0	0	0	0	0	530	17
Indonesia	1,453	0	0	0	0	0	0	0	494	0	0	494	1,947	63
Nigeria	4,951	0	0	0	0	0	0	0	0	0	0	0	4,951	160
Venezuela	1,365	0	260	0	0	0	0	0	3,729	0	57	4,046	5,411	175
Subtotal Other OPEC	8,298	0	260	0	0	0	0	0	4,539	0	57	4,855	13,154	424
<b>Other</b>														
Angola	0	0	0	0	0	0	0	0	389	0	0	389	389	13
Australia	0	0	0	0	0	0	0	0	253	0	0	253	253	8
Bahamas	0	0	562	0	0	0	0	232	1,121	0	0	1,914	1,914	62
Brazil	381	0	0	0	259	0	0	0	361	0	0	620	1,001	32
Canada	0	355	2	0	26	0	8	427	151	62	126	1,157	1,157	37
Congo	0	0	0	0	0	0	0	0	174	0	0	174	174	6
Egypt	0	0	0	312	0	0	0	0	0	0	0	0	312	10
France	0	0	0	0	0	0	0	0	0	0	16	16	16	1
Malaysia	0	0	0	0	0	0	0	0	621	0	0	621	621	20
Mexico	1,825	0	0	0	0	0	0	0	0	0	0	0	1,825	59
Netherlands	0	0	0	0	1,053	0	0	240	217	0	0	1,510	1,510	49
Netherlands Antilles	0	0	535	0	121	0	0	3	4,475	0	39	5,173	5,173	167
Oman	633	0	0	0	0	0	0	0	0	0	0	0	633	20
Peru	378	0	0	0	0	0	0	0	784	0	0	784	1,162	37
Puerto Rico	0	0	444	0	475	0	0	458	0	0	107	1,484	1,484	48
Trinidad and Tobago	495	0	0	0	0	0	0	0	495	0	0	495	989	32
United Kingdom	6,514	7	0	0	386	0	0	0	289	0	26	708	7,322	236
Virgin Islands	0	0	306	0	2,046	225	468	1,900	3,936	0	0	8,880	8,880	286
Other Western Hemisphere	0	0	0	0	0	0	0	0	556	0	0	556	556	18
Other Eastern Hemisphere	448	0	0	0	231	0	0	0	225	0	(9)	456	904	29
Subtotal Other	10,773	362	1,849	312	4,597	225	476	3,260	14,044	62	312	25,500	36,274	1,170
<b>Total Imports</b>	<b>23,953</b>	<b>489</b>	<b>2,291</b>	<b>312</b>	<b>4,597</b>	<b>225</b>	<b>476</b>	<b>3,260</b>	<b>20,311</b>	<b>62</b>	<b>369</b>	<b>32,392</b>	<b>56,345</b>	<b>1,818</b>
PAD District II														
<b>Arab OPEC</b>														
Algeria	1,106	0	0	0	0	0	0	0	0	0	0	0	1,106	36
Saudi Arabia	347	0	0	0	0	0	0	0	0	0	0	0	347	11
Subtotal Arab OPEC	1,453	0	0	0	0	0	0	0	0	0	0	0	1,453	47

See footnotes at end of table.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, December 1982  
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill Fuel Oil	Residual Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
PAD District II														
<b>Other OPEC</b>														
Iran .....	993	0	0	0	0	0	0	0	0	0	0	0	993	32
Nigeria .....	3,371	0	0	0	0	0	0	0	0	0	0	0	3,371	109
Venezuela .....	821	0	0	0	0	0	0	0	0	0	0	0	821	26
Subtotal Other OPEC .....	5,184	0	0	0	0	0	0	0	0	0	0	0	5,184	167
<b>Other</b>														
Canada .....	5,159	6,273	253	134	6	0	0	1	305	112	22	7,106	12,265	396
Egypt .....	518	0	0	0	0	0	0	0	0	0	0	0	518	17
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	4,278	0	0	0	0	0	0	0	0	0	0	0	4,278	138
United Kingdom .....	1,477	0	0	0	0	0	0	0	0	0	(s)	(s)	1,477	48
Other Eastern Hemisphere .....	1,573	0	0	0	0	0	0	0	0	0	(s)	(s)	1,573	51
Subtotal Other .....	13,005	6,273	253	134	6	0	0	1	305	112	22	7,106	20,112	649
<b>Total Imports</b> .....	19,643	6,273	253	134	6	0	0	1	305	112	22	7,106	26,750	863
PAD District III														
<b>Arab OPEC</b>														
Algeria .....	473	0	0	0	0	0	0	0	0	0	0	0	473	15
Saudi Arabia .....	3,399	0	0	0	0	0	0	0	0	0	0	0	3,399	110
Subtotal Arab OPEC .....	3,872	0	0	0	0	0	0	0	0	0	0	0	3,872	125
<b>Other OPEC</b>														
Gabon .....	882	0	0	0	0	0	0	0	0	0	0	0	882	28
Indonesia .....	952	0	0	0	0	0	0	0	0	0	0	0	952	31
Iran .....	1,722	0	0	0	0	0	0	0	0	0	0	0	1,722	56
Nigeria .....	5,199	0	0	0	0	0	0	0	344	0	0	344	5,542	179
Venezuela .....	4,060	0	1,239	89	0	0	0	0	340	340	0	2,008	6,068	196
Subtotal Other OPEC .....	12,814	0	1,239	89	0	0	0	0	684	340	0	2,352	15,166	489
<b>Other</b>														
Australia .....	0	0	0	0	0	0	0	0	1	0	0	1	1	(s)
Bahamas .....	0	0	835	0	0	0	0	0	0	0	0	835	835	27
Canada .....	0	0	0	105	0	0	0	0	0	0	0	105	105	3
France .....	0	0	0	0	0	0	0	0	0	8	0	8	8	(s)
Mexico .....	14,785	0	0	0	(s)	0	0	8	0	(s)	1	10	14,785	477
Netherlands .....	0	0	0	0	0	0	0	0	0	22	0	22	22	1
Norway .....	1,365	0	0	0	0	0	0	0	0	0	0	0	1,365	44
Spain .....	0	0	0	0	0	0	0	0	504	0	3	507	507	16
Trinidad and Tobago .....	2,151	0	0	0	0	0	0	0	0	0	23	23	2,174	70
United Kingdom .....	4,768	0	0	0	0	0	0	0	0	0	0	0	4,768	154
Virgin Islands .....	0	0	1,392	0	0	0	0	0	0	139	0	1,531	1,531	49
Zaire .....	299	0	0	0	0	0	0	0	0	0	0	0	299	10
<b>Other Western Hemisphere</b>														
Hemisphere .....	143	0	0	0	0	0	0	0	0	4	0	4	147	5
Other Eastern Hemisphere .....	0	0	655	0	0	0	0	0	737	6	78	1,477	1,477	48
Subtotal Other .....	23,511	0	2,862	105	(s)	0	0	8	1,243	180	105	4,523	28,034	904

See footnotes at end of table.

Table 21. Imports of Petroleum Products by Source and PAD District, December 1982  
(continued)

Source	Crude Oil 1	LPG and Ethane	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
PAD District III														
Other														
Total Imports	40,197	0	4,122	194	(5)	0	0	8	1,926	520	105	6,875	47,072	1,518
PAD District IV														
Other														
Canada	1,774	571	0	0	0	0	0	(5)	9	(5)	76	656	2,430	78
Subtotal Other	1,774	571	0	0	0	0	0	(5)	9	(5)	76	656	2,430	78
Total Imports	1,774	571	0	0	0	0	0	(5)	9	(5)	76	656	2,430	78
PAD District V														
Arab OPEC														
United Arab Emirates	0	0	0	368	0	0	0	0	0	0	0	368	368	12
Subtotal Arab OPEC	0	0	0	368	0	0	0	0	0	0	0	368	368	12
Other OPEC														
Indonesia	5,117	0	0	0	152	0	0	39	10	0	0	201	5,319	172
Venezuela	0	0	0	61	0	0	0	0	0	0	0	61	61	2
Subtotal Other OPEC	5,117	0	0	61	152	0	0	39	10	0	0	262	5,380	174
Other														
Australia	0	26	0	0	0	0	0	0	0	0	0	26	26	1
Brunei	217	0	0	0	0	0	0	0	0	0	0	0	217	7
Canada	736	647	7	0	0	0	1	(5)	26	10	1	692	1,428	46
Mexico	0	0	0	0	0	0	0	9	0	0	6	15	15	(5)
Netherlands Antilles	0	0	0	0	0	0	0	0	214	0	0	214	214	7
People's Republic of China	0	0	0	0	699	0	0	25	35	0	0	759	759	24
United Kingdom	0	0	0	0	0	0	0	0	0	0	(5)	(5)	(5)	(5)
Other Eastern Hemisphere	0	(5)	0	0	69	0	0	24	333	0	(5)	426	426	14
Subtotal Other	953	673	7	0	768	0	1	58	608	10	7	2,131	3,084	99
Total Imports	6,071	673	7	429	920	0	1	97	618	10	7	2,762	8,832	285

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

2 Includes aviation gasoline, waxes, asphalt, lubricants, natural gasoline, isopentane, plant condensate, naphthas less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(5) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation

Table 22. Exports of Crude Oil and Petroleum Products by PAD District, December 1982  
(Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1</sup>	0	36	0	0	5,934	5,970
Liquefied Petroleum Gases and Ethane	53	360	1,167	(*)	160	1,740
Ethane	0	0	(*)	0	0	(*)
Propane	23	142	836	(*)	64	1,065
Butane	30	218	331	(*)	96	675
Butane-Propane Mixtures	0	0	0	0	0	0
Finished Motor Gasoline	1	1	191	0	15	208
Naphtha-Type Jet Fuel	0	0	0	0	1	1
Kerosene-Type Jet Fuel	283	0	373	0	26	682
Kerosene	(*)	0	0	0	(*)	1
Distillate Fuel Oil	779	0	3,162	0	495	4,436
Residual Fuel Oil	(*)	0	3,188	0	2,584	5,771
Naphtha < 400 Deg. for Petrochem. Feedstock	41	5	135	(*)	5	187
Other Oils > 400 Deg. for Petrochem. Feedstock	1	16	652	0	1	670
Special Naphthas	3	2	18	(*)	1	24
Lubricants	68	11	295	(*)	63	438
Wax	5	(*)	10	0	6	21
Petroleum Coke	80	302	2,653	(*)	3,273	6,308
Asphalt	154	1	1	1	1	159
Miscellaneous Products	12	1	16	(*)	3	32
Total Product Exports	1,480	699	11,862	3	6,834	20,687
Total Exports	1,480	735	11,862	3	12,568	26,657

<sup>1</sup> Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange on a barrel-for-barrel basis. Shipments of crude oil to Puerto Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

(\*) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.



Table 23. Exports of Crude Oil and Petroleum Products by Destination, December 1982  
(Thousands of Barrels)

Destination	Crude Oil 1	LPG and Ethane	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubricants	Wax	Petro-leum Coke	Asphalt	Other	Total	Total (Daily Average)
Argentina	0	1	0	0	0	0	(s)	(s)	(s)	50	(s)	2	53	2
Australia	0	1	0	0	0	0	(s)	(s)	(s)	55	(s)	3	61	2
Bahamas	0	5	1	0	0	100	(s)	3	0	0	0	(s)	108	3
Bahrain	0	1	0	0	0	0	(s)	(s)	0	0	0	(s)	1	(s)
Belgium & Luxembourg	0	40	0	0	99	0	(s)	(s)	(s)	845	(s)	(s)	985	32
Brunei	0	140	0	0	0	0	(s)	1	0	0	0	1	141	5
Cameroon	0	(s)	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Canada	36	366	1	0	0	648	3	34	1	437	4	36	1,565	50
Chile	0	0	0	0	0	0	0	3	(s)	0	0	1	4	(s)
China (Taiwan)	0	(s)	0	0	0	0	0	21	(s)	123	0	(s)	145	5
Colombia	0	1	0	0	0	0	0	10	(s)	(s)	0	1	12	(s)
Costa Rica	0	(s)	0	0	0	0	(s)	4	(s)	0	0	(s)	4	(s)
Denmark	0	0	0	0	0	0	0	(s)	(s)	0	0	(s)	(s)	(s)
Dominican Republic	0	11	0	0	0	0	(s)	7	1	0	0	1	12	(s)
Ecuador	0	0	0	0	0	0	(s)	(s)	0	0	0	(s)	9	(s)
Egypt	0	0	0	0	0	0	(s)	1	0	0	0	(s)	1	(s)
El Salvador	0	0	0	0	0	0	(s)	9	0	0	0	(s)	9	(s)
Finland	0	(s)	0	0	0	0	0	0	0	0	0	(s)	0	(s)
France	0	0	0	0	(s)	0	0	(s)	0	0	0	(s)	(s)	(s)
French Pacific Isl	0	53	0	0	184	0	(s)	1	2	716	(s)	161	1,115	36
Ghana	0	0	0	0	33	22	(s)	(s)	0	0	0	0	55	2
Greece	0	0	0	0	0	0	(s)	(s)	0	31	0	0	31	1
Guatemala	0	1	0	0	833	0	(s)	(s)	0	76	0	(s)	911	29
Guinea	0	0	0	0	0	0	(s)	5	3	0	0	(s)	9	(s)
Honduras	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Hong Kong	0	1	0	0	0	0	0	8	0	0	0	(s)	8	(s)
India	0	0	0	0	0	0	(s)	1	(s)	0	0	(s)	3	(s)
Indonesia	0	0	0	0	0	0	0	(s)	(s)	27	0	1	28	1
Iran	0	0	0	0	0	0	(s)	25	(s)	0	0	(s)	25	1
Israel	0	1	0	0	0	0	(s)	0	0	0	0	0	0	0
Italy	0	358	0	0	224	326	0	(s)	(s)	0	0	(s)	2	(s)
Ivory Coast	0	0	0	0	0	0	(s)	1	(s)	230	0	248	1,386	45
Jamaica	0	10	0	0	0	0	(s)	5	0	1	0	(s)	6	(s)
Japan	0	20	0	0	86	310	(s)	22	(s)	0	0	4	36	1
Jordan	0	0	(s)	0	0	0	11	4	2	1,211	(s)	54	1,699	55
Korea, Republic of	0	0	0	0	294	1,044	0	(s)	0	0	0	(s)	1	(s)
Kuwait	0	0	0	0	0	0	0	3	(s)	28	0	2	1,372	44
Lebanon	0	0	0	0	0	0	0	2	(s)	0	152	(s)	155	5
Libania	0	0	0	0	0	0	0	(s)	0	0	0	(s)	2	(s)
Malaysia	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Mexico	0	635	206	27	172	0	1	16	0	0	0	(s)	1	(s)
Netherlands	0	66	0	223	1,026	1,401	5	8	(s)	37	0	3	1,103	36
Netherlands Antilles	0	0	0	0	0	0	(s)	(s)	(s)	1,049	(s)	24	3,803	123
New Zealand	0	0	0	0	0	0	0	(s)	0	0	0	(s)	1	(s)
Nicaragua	0	0	0	0	0	0	0	20	0	0	0	(s)	21	1
Nigeria	0	0	0	126	0	0	0	43	0	55	0	(s)	169	5
Norway	0	0	0	0	0	0	0	(s)	(s)	0	0	(s)	56	2
Pacific Trust Terr.	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Panama	0	0	0	0	0	0	0	19	(s)	1	0	1	21	1
Peru	0	0	0	0	0	0	(s)	3	(s)	0	0	(s)	3	(s)
Philippines	0	0	0	0	0	0	0	8	1	(s)	0	2	12	(s)

See footnotes at end of table.

Table 23. Exports of Crude Oil and Petroleum Products by Destination, December 1982  
(Thousands of Barrels)  
(continued)

Destination	Crude Oil 1	LPG and Ethane	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubricants	Wax	Petroleum Coke	Asphalt	Other	Total	Total (Daily Average)
Puerto Rico .....	1,931	16	(s)	0	0	382	1	12	1	0	0	8	2,351	76
Rep. of South Africa .....	0	0	0	0	0	0	0	5	(s)	0	(s)	148	152	5
Saudi Arabia .....	0	3	0	0	0	0	(s)	20	0	0	(s)	3	26	1
Singapore .....	0	1	0	0	0	470	0	6	(s)	0	(s)	2	478	15
Spain .....	0	0	0	0	0	0	0	1	(s)	760	0	1	762	25
Surinam .....	0	0	0	0	0	0	0	(s)	0	10	0	(s)	10	(s)
Sweden .....	0	0	0	0	0	0	0	1	(s)	0	0	(s)	470	15
Switzerland .....	0	0	0	0	469	0	0	1	(s)	0	0	(s)	454	15
Thailand .....	0	1	0	0	453	0	(s)	1	(s)	0	(s)	1	2	(s)
Trinidad and Tobago .....	0	(s)	0	0	0	0	0	1	0	0	(s)	1	2	(s)
Turkey .....	0	0	0	0	(s)	0	(s)	(s)	(s)	193	0	22	216	7
United Arab Emirates .....	0	(s)	0	0	0	0	(s)	(s)	0	0	0	1	2	(s)
United Kingdom .....	0	1	0	150	224	331	0	10	(s)	62	(s)	14	792	26
U.S.S.R. ....	0	0	0	0	0	0	0	81	(s)	222	0	13	316	10
Uruguay .....	0	0	0	0	0	0	0	(s)	(s)	0	0	(s)	1	(s)
Venezuela .....	0	2	0	0	0	0	(s)	(s)	(s)	47	(s)	2	51	2
Virgin Islands .....	3,456	(s)	0	0	0	738	0	0	0	0	0	(s)	4,194	135
West Germany .....	0	0	0	0	206	0	0	1	(s)	0	0	105	312	10
Yugoslavia .....	0	0	0	0	0	0	0	(s)	0	45	0	0	45	1
Other .....	547	5	0	167	132	0	(s)	4	(s)	0	(s)	19	875	28
Total .....	5,970	1,740	208	693	4,436	5,771	24	438	21	6,308	159	889	26,657	860

1 Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange, on a barrel-for-barrel basis. Shipments of crude oil to Puerto Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Crude Oil and Petroleum Products by PAD District, December 31, 1982  
(in Barrels)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wis., Dets. Mo.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La. Ark.	New Mexico	Total	Rocky Mt.	
<b>Crude Oil (incl. lease condensate):<sup>1</sup></b>																
Refinery	—	—	15,182	—	—	—	—	15,911	—	—	—	—	—	41,525	1,733	25,310
Tank Farms and Pipelines	—	—	2,265	—	—	—	—	60,969	—	—	—	—	—	98,054	10,263	30,819
Leases	—	—	65	—	—	—	—	1,569	—	—	—	—	—	17,186	1,440	1,782
Strategic Petroleum Reserve <sup>2</sup>	—	—	0	—	—	—	—	0	—	—	—	—	—	283,827	0	0
Alaskan In-Transit	—	—	0	—	—	—	—	0	—	—	—	—	—	0	0	22,643
Total	—	—	17,512	—	—	—	—	78,469	—	—	—	—	—	451,582	13,436	80,554
<b>Petroleum Products</b>																
Refinery	42,866	3,622	46,488	886	42,571	6,293	20,032	69,782	10,287	71,175	47,632	5,371	1,441	135,906	14,515	65,365
Bulk Terminal	141,110	8,542	149,652	3,979	40,556	8,785	11,981	65,311	4,766	30,064	8,130	3,533	544	47,037	2,958	19,821
Pipeline	26,456	2,715	29,171	1,294	12,436	3,952	18,219	35,901	7,444	8,963	7,451	15,293	1,053	40,144	2,813	4,301
Natural Gas Processing Plant	429	572	1,001	0	2,441	120	16,189	18,750	5,488	18,363	9,279	3,618	690	37,437	311	700
Total	210,861	15,451	226,312	6,159	98,004	19,150	66,431	189,744	27,985	128,505	72,492	27,815	3,728	260,524	20,597	90,187
<b>Natural Gasoline and Isopentane</b>																
Refinery	2	0	2	0	28	135	105	268	37	89	173	1	24	324	8	28
Pipeline	0	0	0	0	129	17	268	414	211	37	0	81	81	410	182	5
Natural Gas Processing Plant	2	24	25	0	26	16	1,614	1,656	332	1,742	474	33	40	2,622	40	22
Total	4	24	27	0	183	168	1,987	2,338	580	1,868	647	115	145	3,356	230	55
<b>Unfractionated Stream</b>																
Pipeline	0	0	0	0	78	0	16	94	0	28	28	0	0	56	0	0
Natural Gas Processing Plant	0	0	0	0	102	2	2,114	2,218	223	724	56	1	167	1,172	32	1
Total	0	0	0	0	180	2	2,130	2,312	223	752	84	1	167	1,228	32	1
<b>Plant Condensate</b>																
Refinery	0	0	0	0	5	0	0	5	12	86	0	82	0	180	0	0
Pipeline	0	0	0	0	0	0	0	0	814	269	49	4	17	1,153	0	0
Natural Gas Processing Plant	0	0	0	0	2	0	5	7	42	37	3	9	1	91	10	0
Total	0	0	0	0	7	0	5	12	868	392	52	95	18	1,424	10	0
<b>Ethane</b>																
Refinery	0	0	0	0	8	0	0	8	0	377	0	0	0	377	0	0
Bulk Terminal	0	0	0	0	50	0	42	92	0	289	0	0	0	289	0	0
Pipeline	0	0	0	0	43	940	152	1,135	167	79	107	0	3	356	0	0
Natural Gas Processing Plant	0	0	0	0	25	0	850	874	388	1,390	302	(9)	0	2,080	1	0
Total	0	0	0	0	126	940	1,044	2,109	555	2,135	409	(9)	3	3,102	1	0
<b>Propane for Petrochemical Feedstock Use</b>																
Refinery	55	0	55	0	90	0	2	92	0	5	417	0	0	422	0	0
Total	55	0	55	0	90	0	2	92	0	5	417	0	0	422	0	0
<b>Propane for Other Uses</b>																
Refinery	650	8	658	4	1,191	39	302	1,536	77	689	1,005	3	5	1,779	162	235
Bulk Terminal	606	0	606	0	1,083	82	300	1,465	134	10,610	126	32	0	10,902	31	0
Pipeline	893	1,513	2,406	3	1,948	254	1,948	3,633	472	408	249	518	152	1,799	121	0
Natural Gas Processing Plant	395	540	935	0	2,189	91	8,179	10,459	2,693	4,999	5,462	3,470	210	16,833	146	238
Total	2,544	2,061	4,605	7	5,891	466	10,729	17,093	3,376	16,706	6,842	4,023	367	31,313	460	473

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, December 31, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I		PAD District II					PAD District III					PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No La., Ark.	New Mexico	Total		Rocky Mt.	Dist. V West Coast
Butane for Petro. Feed. Use																	
Refinery .....	0	0	0	0	0	17	0	17	0	22	0	2	0	0	24	0	43
Total .....	0	0	0	0	0	17	0	17	0	22	0	2	0	0	24	0	43
Butane for Other Uses																	
Refinery .....	182	0	182	162	208	53	194	617	74	379	543	4	4	1,004	155	601	2,559
Bulk Terminal .....	236	0	236	0	206	0	73	279	95	2,230	0	0	0	2,325	0	0	2,840
Pipeline .....	33	65	98	58	724	15	326	1,123	875	19	5	140	77	1,116	144	0	2,481
Natural Gas Processing Plant .....	17	7	23	0	58	9	871	938	863	3,233	1,894	62	90	6,142	40	358	7,502
Total .....	468	72	539	220	1,196	77	1,464	2,957	1,907	5,861	2,442	206	171	10,587	339	959	15,382
Butane-Propane Mixtures for Petro. Feed. Use																	
Refinery .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Butane-Propane Mixtures for Other Uses																	
Refinery .....	0	0	0	0	0	0	0	0	1	10	11	0	7	29	14	174	217
Bulk Terminal .....	0	0	0	0	130	0	0	130	0	0	0	0	0	0	0	0	130
Pipeline .....	0	0	0	0	0	0	20	20	604	796	14	0	1	1,415	0	0	1,435
Natural Gas Processing Plant .....	0	0	0	0	11	0	36	47	56	2	(8)	1	0	59	0	5	111
Total .....	0	0	0	0	141	0	56	197	661	808	25	1	8	1,503	14	179	1,893
Ethane-Propane Mixtures																	
Bulk Terminal .....	0	0	0	0	3	0	7	10	116	2,408	0	0	0	2,524	0	0	2,534
Pipeline .....	0	0	0	0	66	0	457	523	398	60	2	0	114	574	122	0	1,219
Natural Gas Processing Plant .....	0	0	0	0	0	0	1,288	1,288	318	4,305	0	0	109	4,733	0	0	6,021
Total .....	0	0	0	0	69	0	1,752	1,821	832	6,773	2	0	223	7,831	122	0	9,774
Isobutane																	
Refinery .....	0	8	8	33	124	25	164	346	100	133	432	13	7	685	22	26	1,087
Bulk Terminal .....	0	0	0	0	53	0	92	145	98	1,375	0	0	0	1,473	0	0	1,618
Pipeline .....	15	0	15	0	315	0	76	391	159	11	0	150	48	368	36	0	810
Natural Gas Processing Plant .....	1	2	2	0	23	2	1,233	1,258	321	1,928	1,086	39	71	3,445	1	76	4,782
Total .....	16	10	25	33	515	27	1,585	2,140	678	3,447	1,518	202	126	5,971	59	102	8,297
Other Hydrocarbons and Alcohol																	
Refinery .....	83	26	109	0	70	0	0	70	1	86	40	0	0	127	0	5	311
Total .....	83	26	109	0	70	0	0	70	1	86	40	0	0	127	0	5	311
Unfinished Oils																	
Refinery .....	3,265	315	3,580	43	2,570	122	1,139	3,874	791	6,228	4,266	141	95	11,521	439	4,689	24,103
Naphtha and Lighter .....	1,896	9	1,905	0	2,058	8	752	2,818	416	6,083	1,343	36	5	7,883	334	3,794	16,734
Kerosene and Lighter Gas Oils .....	5,794	357	6,151	87	4,708	325	1,802	6,922	848	11,502	6,278	673	138	19,439	818	11,229	44,559
Heavy Gas Oils .....	1,711	309	2,020	4	2,898	21	1,247	4,170	542	3,560	3,219	45	0	7,366	1,095	5,230	19,881
Residuum .....	12,666	990	13,656	134	12,234	476	4,940	17,784	2,597	27,373	15,106	895	238	46,209	2,686	24,942	105,277
Total .....																	

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, December 31, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III			PAD District IV			United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dets.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Coast	No. La. Ark.	New Mexico	Total		Rocky Mt.	Dist. V West Coast
Motor Gasoline Blending Components																	
Refinery	4,956	105	5,061	32	5,903	683	1,976	8,594	1,369	8,308	6,398	100	193	16,358	2,473	7,614	40,100
Bulk Terminal	219	1	220	5	92	2	81	180	49	0	0	0	0	49	0	45	494
Pipeline	0	0	0	0	84	2	220	306	35	0	0	0	0	35	0	0	341
Total	5,175	106	5,281	37	6,079	687	2,277	9,080	1,453	8,308	6,398	100	193	16,442	2,473	7,659	40,935
Aviation Gasoline Blending Components																	
Refinery	5	0	5	0	140	0	9	149	37	70	209	0	0	316	0	22	492
Total	5	0	5	0	140	0	9	149	37	70	209	0	0	316	0	22	492
Total Finished Motor Gasoline																	
Refinery	6,031	327	6,358	107	5,920	1,315	3,744	11,086	2,366	8,160	6,395	994	208	18,123	2,884	8,373	46,824
Bulk Terminal	37,291	3,415	40,706	1,890	18,045	3,992	5,301	29,228	2,353	5,556	1,846	2,066	328	11,949	1,849	9,575	93,307
Pipeline	14,410	718	15,128	629	6,004	1,322	7,898	15,853	2,438	4,391	4,318	8,365	181	19,693	1,313	2,264	54,251
Natural Gas Processing Plant	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	54
Total Finished Motor Gasoline	57,746	4,460	62,206	2,626	29,969	6,629	16,943	56,167	7,157	18,107	12,359	11,425	717	49,765	6,066	20,212	194,436
Finished Leaded Motor Gasoline																	
Refinery	2,534	197	2,731	48	2,778	852	2,125	5,803	1,353	3,869	3,090	766	102	9,180	1,869	3,553	23,156
Bulk Terminal	17,684	1,606	19,290	974	9,236	2,364	3,425	15,999	1,289	2,876	779	1,025	189	6,158	1,193	5,017	47,657
Pipeline	6,780	283	7,063	345	2,975	871	4,385	8,576	965	2,595	1,742	4,331	85	9,718	835	1,113	27,305
Natural Gas Processing Plant	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	43
Total	27,004	2,086	29,090	1,367	14,989	4,087	9,935	30,378	3,607	9,340	5,611	6,122	376	25,056	3,954	9,683	98,161
Finished Unleaded Motor Gasoline																	
Refinery	3,497	130	3,627	59	3,139	463	1,619	5,280	1,013	4,291	3,305	228	106	8,943	994	4,813	23,657
Bulk Terminal	19,595	1,809	21,404	916	8,767	1,628	1,870	13,181	1,064	2,680	867	1,041	139	5,791	656	4,558	45,590
Pipeline	7,630	435	8,065	284	3,029	450	3,513	7,276	1,473	1,796	2,576	4,034	96	9,975	478	1,151	26,945
Natural Gas Processing Plant	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	30,731	2,374	33,105	1,259	14,935	2,541	7,002	25,737	3,550	8,767	6,748	5,303	341	24,709	2,131	10,522	96,204
Gasohol																	
Refinery	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	7	11
Bulk Terminal	12	0	12	0	42	0	6	48	0	0	0	0	0	0	0	0	60
Pipeline	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	12	0	12	0	45	1	6	52	0	0	0	0	0	0	1	7	72
Finished Aviation Gasoline																	
Refinery	12	0	12	0	81	0	29	110	22	365	92	0	0	479	44	223	868
Bulk Terminal	352	64	416	1	279	46	87	413	42	5	2	23	16	88	23	391	1,331
Pipeline	0	0	0	0	10	0	9	19	9	5	0	0	0	14	0	0	33
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	74	0	0	0	0	74	0	0	74
Total	364	64	428	1	370	46	125	542	147	375	94	23	16	655	67	614	2,306
Naphtha-Type Jet Fuel																	
Refinery	251	36	287	0	416	29	270	715	292	520	467	190	128	1,597	251	831	3,681
Bulk Terminal	18	10	28	9	159	46	166	380	116	52	0	44	0	212	13	95	728
Pipeline	199	0	199	21	16	96	76	209	85	0	62	110	228	485	85	286	1,264
Total	468	46	514	30	591	171	512	1,304	493	572	529	344	356	2,294	349	1,212	5,673

See footnotes at end of table.

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, December 31, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Ark.	No. La., Ark.	New Mexico	Total	Dist. IV Rocky Mts.		Dist. V West Coast
Kerosene-Type Jet Fuel																	
Refinery	1,191	0	1,191	43	1,172	104	202	1,521	305	1,813	2,252	17	23	4,410	379	3,019	10,520
Bulk Terminal	4,414	178	4,592	59	2,563	236	543	3,401	228	1,072	83	44	37	1,464	150	1,615	11,222
Pipeline	3,164	110	3,274	84	557	211	1,490	2,342	418	787	732	1,113	37	3,087	109	622	9,434
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	0	0	0	(s)	0	(s)	0	0	(s)
Total	8,769	288	9,057	186	4,292	551	2,235	7,264	951	3,672	3,067	1,174	97	8,961	638	5,256	31,176
Kerosene																	
Refinery	307	90	397	0	592	44	223	859	52	840	449	8	54	1,403	13	97	2,769
Bulk Terminal	3,815	403	4,218	230	1,272	70	21	1,593	14	332	36	24	0	406	29	48	6,294
Pipeline	590	2	592	26	129	0	39	194	31	70	300	175	0	576	0	1	1,363
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	1	0	0	0	(s)	2	0	0	2
Total	4,712	495	5,207	256	1,993	114	283	2,646	98	1,242	785	207	54	2,387	42	146	10,428
Total Distillate Fuel Oils																	
Refinery	8,086	505	8,591	53	7,579	2,119	4,670	14,421	1,381	8,356	5,192	1,311	353	16,593	2,463	5,981	48,049
Bulk Terminal	61,306	3,232	64,538	1,379	13,725	3,430	4,425	22,959	1,308	4,500	1,622	1,093	163	8,686	860	5,642	102,685
Pipeline	7,152	307	7,459	473	2,853	1,095	5,209	9,630	687	1,940	1,585	4,637	114	8,963	701	1,106	27,859
Natural Gas Processing Plant	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	2
Total Distillate Fuel Oil	76,544	4,044	80,588	1,905	24,157	6,644	14,305	47,011	3,377	14,796	8,399	7,041	630	34,243	4,024	12,729	178,595
Dist. Fuel Oils Less No. 4 Fuel Oil																	
Refinery	8,086	498	8,584	53	7,542	2,119	4,670	14,384	1,344	8,120	5,044	1,230	295	16,033	2,455	5,923	47,379
Bulk Terminal	59,901	3,232	63,133	1,371	13,662	3,430	4,425	22,888	1,294	4,500	1,555	1,093	163	8,605	860	5,605	101,091
Pipeline	7,152	307	7,459	473	2,853	1,095	5,209	9,630	687	1,940	1,585	4,637	114	8,963	701	1,106	27,859
Natural Gas Processing Plant	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	2
Total	75,139	4,037	79,176	1,897	24,057	6,644	14,305	46,903	3,326	14,560	8,184	6,960	572	33,602	4,016	12,634	176,331
No. 4 Fuel Oil																	
Refinery	0	7	7	0	37	0	0	37	37	236	148	81	58	560	8	58	670
Bulk Terminal	1,405	0	1,405	8	63	0	0	71	14	0	67	0	0	81	0	37	1,594
Total	1,405	7	1,412	8	100	0	0	108	51	236	215	81	58	641	8	95	2,264
Residual Fuel Oils																	
Refinery	4,463	137	4,600	111	2,500	379	159	3,149	317	5,150	4,460	279	40	10,246	634	7,620	26,249
Bulk Terminal	29,557	577	30,134	153	1,107	170	643	2,073	201	1,616	4,169	41	0	6,027	0	1,674	39,908
Pipeline	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	17	18
Total	34,020	714	34,734	264	3,607	549	802	5,222	518	6,767	8,629	320	40	16,274	634	9,311	66,175
Naphtha < 400 Deg. Petro. Feedstock																	
Refinery	102	0	102	0	97	0	85	182	108	969	330	9	0	1,416	0	267	1,967
Total	102	0	102	0	97	0	85	182	108	969	330	9	0	1,416	0	267	1,967
Other Oils > 400 Deg. Petro. Feedstock																	
Refinery	5	0	5	0	185	0	1	186	343	832	224	42	0	1,441	0	548	2,180
Total	5	0	5	0	185	0	1	186	343	832	224	42	0	1,441	0	548	2,180

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, December 31, 1982  
(Thousands of Barrels) (continued)

Commodity	PAD District I				PAD District II				PAD District III				PAD District IV			United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky	Minn., Wisc., Dak.	Okl., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Dist. IV Rocky Mt.		Dist. V West Coast
<b>Special Naphthas</b>																	
Refinery	28	42	70	0	210	0	165	375	38	1,284	56	139	0	1,517	9	231	2,202
Bulk Terminal	750	73	823	46	204	5	0	255	0	2	0	21	0	23	0	34	1,135
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	137	0	0	0	0	137	0	0	137
Total	778	115	893	46	414	5	165	630	175	1,286	56	160	0	1,677	9	265	3,474
<b>Lubricants</b>																	
Refinery	88	457	545	0	44	0	49	93	0	297	56	0	0	353	4	39	1,034
Bright Stock	469	486	955	0	567	0	534	1,101	0	1,852	1,002	84	0	2,938	68	572	5,634
Neutral	623	147	770	0	146	0	136	282	47	1,738	281	201	0	2,267	9	110	3,438
Other	821	188	1,009	83	434	18	77	612	12	17	210	60	0	299	3	502	2,425
Bulk Terminals	2,001	1,278	3,279	83	1,191	18	796	2,088	59	3,904	1,549	345	0	5,857	84	1,223	12,531
Total	4	28	32	0	0	0	12	12	26	25	11	0	0	62	0	0	106
Refinery	4	28	32	0	0	0	12	12	26	25	11	0	0	62	0	0	106
<b>Wax, Microcrystalline</b>																	
Refinery	16	66	82	0	18	0	38	56	0	93	183	0	0	276	10	41	465
Total	16	66	82	0	18	0	38	56	0	93	183	0	0	276	10	41	465
<b>Wax, Crystalline-Fully Refined</b>																	
Refinery	6	74	80	0	0	0	11	11	0	108	0	0	0	108	0	16	215
Total	6	74	80	0	0	0	11	11	0	108	0	0	0	108	0	16	215
<b>Wax, Crystalline-Other</b>																	
Refinery	801	0	801	0	816	132	1,026	1,974	1	137	523	268	0	929	776	2,241	6,721
Total	801	0	801	0	816	132	1,026	1,974	1	137	523	268	0	929	776	2,241	6,721
<b>Petroleum Coke</b>																	
Refinery	1,474	38	1,512	206	2,148	731	971	4,056	635	573	976	679	157	3,020	1,451	1,289	11,328
Bulk Terminal	1,706	401	2,107	124	1,137	686	130	2,077	0	0	225	72	0	237	0	75	4,556
Total	3,180	439	3,619	330	3,285	1,417	1,101	6,133	635	573	1,201	751	157	3,317	1,451	1,364	15,884
<b>Asphalt</b>																	
Refinery	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	32	47
Total	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	32	47
<b>Road Oil</b>																	
Refinery	310	52	362	1	64	12	15	92	49	436	359	50	0	894	0	186	1,534
Bulk Terminal	19	0	19	0	14	2	3	19	0	0	11	13	0	24	0	125	187
Pipeline	0	0	0	0	0	0	15	15	41	2	0	0	0	43	0	0	58
Natural Gas Processing Plant	0	0	0	0	4	0	(9)	4	40	4	1	2	(9)	48	1	0	53
Total	329	52	381	1	82	14	33	130	130	442	371	65	(9)	1,009	1	311	1,832
<b>Miscellaneous Products</b>																	
Refinery	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	32	47
Total	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	32	47
<b>Total Stocks, All Oils</b>																	
	—	—	243,824	—	—	—	—	268,213	—	—	—	—	—	712,116	34,033	170,741	1,428,927

1 Crude oil data are not collected by refinery district.

2 Includes 33949 thousands of barrels of domestic crude oil.

(9) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 25. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, December 1982  
(Thousands of Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	V	I	III	IV	V	I	II	IV	V	II	III	I	II
Crude Oil	43	0	0	0	0	0	0	423	1,271	0	0	0	0	2,750	0 14,071
Petroleum Products	8,433	436	0	2,705	5,517	2,568	0	86,534	27,511	0	2,902	1,200	69	1,300	0 40
Natural Gasoline and Isopentane	0	0	0	0	326	0	0	0	1,078	0	0	342	12	0	0 0
Unfractionated Stream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
Liquefied Petroleum Gases	0	25	0	471	1,938	198	0	2,108	7,147	0	0	77	57	0	0 0
Unfinished Oils	28	208	0	0	0	0	0	742	45	0	346	0	0	0	0 0
Motor Gasoline Blending Components	0	0	0	0	0	0	0	0	914	0	0	0	0	0	0 0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
Finished Motor Gasoline	5,755	0	0	1,556	2,032	1,471	0	47,214	10,790	0	914	487	0	816	0 0
Finished Leaded Motor Gasoline	3,133	0	0	630	1,099	723	0	20,335	4,903	0	521	334	0	550	0 0
Finished Unleaded Motor Gasoline	2,622	0	0	926	933	748	0	26,879	5,887	0	393	153	0	266	0 0
Gasohol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
Finished Aviation Gasoline	0	0	0	0	0	23	0	151	95	0	0	0	0	0	0 0
Naphtha-Type Jet Fuel	153	0	0	0	132	0	0	663	0	0	231	75	0	95	0 0
Kerosene-Type Jet Fuel	358	0	0	100	90	719	0	8,344	2,114	0	216	8	0	55	0 0
Kerosene	73	0	0	2	0	0	0	1,233	99	0	0	0	0	0	0 0
Distillate Fuel Oil	1,984	50	0	233	548	157	0	21,777	4,402	0	394	211	0	334	0 0
No. 4 Fuel Oil Less No. 4	1,984	40	0	233	548	157	0	21,639	4,402	0	394	211	0	334	0 0
Residual Fuel Oil	0	10	0	0	0	0	0	138	0	0	0	0	0	0	0 0
Naphtha and Other Oils for Petro.	0	108	0	63	394	0	0	2,606	155	0	693	0	0	316	0 0
Feedstock	18	0	0	28	36	0	0	79	22	0	0	0	0	0	0 0
Special Naphthas	0	0	0	15	0	0	0	248	102	0	0	0	0	0	0 0
Lubricants	27	37	0	62	21	0	0	554	147	0	108	0	0	0	20 0
Wax	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0 0
Asphalt and Road Oil	0	0	0	0	0	0	0	192	341	0	0	0	0	0	0 0
Miscellaneous Products	37	8	0	175	0	0	0	616	60	0	0	0	0	0	20 0
Total All Products	8,476	436	0	2,705	5,517	2,568	0	86,957	28,782	0	2,902	1,200	69	1,300	3,066 0 14,111

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.



Table 26. Movements of Petroleum Products by Pipeline Between PAD Districts, December 1982  
(Thousands of Barrels)

Commodity	From I to		From II to			From III to			From IV to			V
	II	I	III	IV	I	II	III	IV	V	II	III	
Natural Gasoline and Isopentane .....	0	0	0	326	0	0	1,078	0	0	342	12	0
Unfractionated Stream .....	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate .....	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases .....	0	471	1,938	198	1,925	7,147	0	0	0	77	57	0
Motor Gasoline Blending Components .....	0	0	0	0	0	914	0	0	0	0	0	0
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline .....	4,226	1,365	2,032	1,471	37,416	10,026	0	914	487	0	816	0
Finished Leaded Motor Gasoline ....	2,364	558	1,099	723	16,289	4,548	0	521	334	0	550	0
Finished Unleaded Motor Gasoline .....	1,862	807	933	748	21,127	5,478	0	393	153	0	266	0
Gasohol .....	0	0	0	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline .....	0	0	0	0	23	17	89	0	0	0	0	0
Naphtha-Type Jet Fuel .....	0	0	132	0	194	0	0	231	75	0	95	0
Kerosene-Type Jet Fuel .....	213	93	90	719	5,795	1,851	0	216	8	0	55	0
Kerosene .....	43	0	0	0	887	99	0	0	0	0	0	0
Distillate Fuel Oil .....	1,318	199	530	157	18,289	4,070	0	394	211	0	334	0
Distillate Fuel Oil Less No. 4 .....	1,318	199	530	157	18,289	4,070	0	394	211	0	334	0
No. 4 Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Products .....	0	175	0	0	0	28	0	0	0	0	0	0
Total .....	5,800	2,303	5,048	2,568	64,523	25,303	0	1,755	1,200	69	1,300	0

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 27. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, December 1982  
(Thousands of Barrels)

Commodity	From I to			From II to			From III to				From V to			
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	V	I	III
Crude Oil .....	43	0	0	0	0	0	423	0	423	0	1,271	0	2,750	14,071
Petroleum Products .....	2,633	436	0	402	469	0	22,011	2,573	5,148	14,190	2,208	1,147	316	40
Liquefied Petroleum Gases .....	0	25	0	0	0	0	183	0	0	183	0	0	0	0
Unfinished Oils .....	28	208	0	0	0	0	742	57	685	0	45	346	0	0
Finished Motor Gasoline .....	1,529	0	0	191	0	0	9,798	746	453	8,599	764	0	0	0
Finished Aviation Gasoline .....	0	0	0	0	0	0	134	19	54	61	6	0	0	0
Naphtha-Type Jet Fuel .....	153	0	0	0	0	0	469	11	134	324	0	0	0	0
Kerosene-Type Jet Fuel .....	145	0	0	7	0	0	2,549	220	412	1,917	263	0	0	0
Kerosene .....	30	0	0	2	0	0	346	0	216	130	0	0	0	0
Distillate Fuel Oil .....	666	50	0	34	18	0	3,488	698	1,032	1,758	332	0	0	0
Residual Fuel Oil .....	0	108	0	63	394	0	2,606	875	981	750	155	693	316	0
Naphtha and Other Oils for Petro. Feed. Use .....	18	0	0	28	36	0	79	0	50	29	22	0	0	0
Special Naphthas .....	0	0	0	15	0	0	248	30	161	57	102	0	0	0
Lubricants .....	27	37	0	62	21	0	554	7	372	175	147	108	0	20
Wax .....	0	0	0	0	0	0	7	0	7	0	0	0	0	0
Asphalt and Road Oil .....	0	0	0	0	0	0	192	0	0	192	341	0	0	0
Miscellaneous Products .....	37	8	0	0	0	0	616	10	591	15	31	0	0	20
Total .....	2,676	436	0	402	469	0	22,434	2,673	5,571	14,190	3,479	1,147	3,066	14,111

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

**Table 28. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge Between PAD Districts, December 1982**  
(Thousands of Barrels)

Commodity	P.A.D. District I			P.A.D. District II			P.A.D. District III			P.A.D. District IV			P.A.D. District V		
	Receipts into PADD I	Shipments from PADD I	Net Receipts PADD I	Receipts into PADD II	Shipments from PADD II	Net Receipts PADD II	Receipts into PADD III	Shipments from PADD III	Net Receipts PADD III	Receipts into PADD IV	Shipments from PADD IV	Net Receipts PADD IV	Receipts into PADD V	Shipments from PADD V	Net Receipts PADD V
<b>Crude Oil</b>	3,173	43	3,130	1,314	0	1,314	14,071	1,694	12,377	0	0	0	0	16,821	-16,821
<b>Petroleum Products</b>	89,555	8,869	80,686	37,144	10,790	26,354	6,062	116,947	-110,885	2,568	2,569	-1	4,202	356	3,846
Natural Gasoline	0	0	0	1,420	326	1,094	338	1,078	-740	0	354	-354	0	0	0
Unfractionated Stream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases	2,579	25	2,554	7,224	2,607	4,617	2,020	9,255	-7,235	198	134	64	0	0	0
Unfinished Oils	742	236	506	73	0	73	208	1,133	-925	0	0	0	346	0	346
Motor Gasoline Blending Components	0	0	0	914	0	914	0	914	-914	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	48,770	5,755	43,015	17,032	5,059	11,973	2,032	58,918	-56,886	1,471	1,303	168	1,730	0	1,730
Finished Leaded Motor Gasoline	20,965	3,133	17,832	8,370	2,452	5,918	1,099	25,759	-24,660	723	884	-161	1,071	0	1,071
Finished Unleaded Motor Gasoline	27,805	2,622	25,183	8,662	2,607	6,055	933	33,159	-32,226	748	419	329	659	0	659
Gasohol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline	151	0	151	95	23	72	0	246	-246	23	0	23	0	0	0
Naphtha-Type Jet Fuel	663	153	510	228	132	96	132	894	-762	0	170	-170	326	0	326
Kerosene-Type Jet Fuel	8,444	358	8,086	2,480	909	1,571	90	10,674	-10,584	719	63	656	271	0	271
Kerosene	1,235	73	1,162	172	2	170	0	1,332	-1,332	0	0	0	0	0	0
Distillate Fuel Oil	22,010	2,034	19,976	6,597	938	5,659	598	26,573	-25,975	157	545	-388	728	0	728
Distillate Fuel Oil Less No. 4	21,872	2,024	19,848	6,597	938	5,659	598	26,435	-25,847	157	545	-388	728	0	728
No. 4 Fuel Oil	138	10	128	0	0	0	10	138	-128	0	0	0	0	0	0
Residual Fuel Oil	2,985	108	2,877	155	457	-302	502	3,454	-2,952	0	0	0	693	316	377
Naphtha and Other Oils for Petro.															
Feedstock Use	107	18	89	40	64	-24	36	101	-65	0	0	0	0	0	0
Special Naphthas	263	0	263	102	15	87	0	350	-350	0	0	0	0	0	0
Lubricants	616	64	552	174	83	91	78	809	-731	0	0	0	108	20	88
Wax	7	0	7	0	0	0	0	7	-7	0	0	0	0	0	0
Asphalt and Road Oil	192	0	192	341	0	341	0	533	-533	0	0	0	0	0	0
Miscellaneous Products	791	45	746	97	175	-78	28	676	-648	0	0	0	0	20	-20
<b>Total All Products</b>	92,728	8,912	83,816	38,458	10,790	27,668	20,133	118,641	-98,508	2,568	2,569	-1	4,202	17,177	-12,975

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 29. Production of No. 4 Fuel Oil and Residual Fuel Oil By Sulfur Content, December 1982  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		PAD Dist. IV Rocky Mts.	PAD Dist. V West Coast
No. 4 Fuel Oil																	
0.00 to 0.30% Sulfur	0	3	3	0	49	0	0	49	39	-174	17	69	215	166	33	96	347
0.31 to 0.50% Sulfur	0	3	3	0	3	0	0	3	0	0	-5	0	0	-5	0	0	1
0.51 to 1.00% Sulfur	0	0	0	0	2	0	0	2	29	0	0	0	0	29	30	0	61
1.01 to 2.00% Sulfur	0	0	0	0	0	0	0	0	5	-174	0	2	215	48	0	37	85
Greater Than 2.00% Sulfur	0	0	0	0	0	0	0	0	5	0	0	0	0	5	3	28	36
	0	0	0	0	44	0	0	44	0	0	22	67	0	89	0	31	164
Residual Fuel Oil	4,475	309	4,784	143	2,648	341	441	3,573	589	5,551	5,312	456	82	11,990	431	9,898	30,676
0.00 to 0.30% Sulfur	484	24	508	0	4	0	0	4	59	142	26	110	13	350	25	646	1,533
0.31 to 0.50% Sulfur	975	3	978	0	31	0	144	175	46	38	12	46	0	142	119	1,239	2,653
0.51 to 1.00% Sulfur	1,802	0	1,802	143	907	0	154	1,204	414	883	934	133	5	2,369	67	1,621	7,063
1.01 to 2.00% Sulfur	246	282	528	0	631	89	109	829	59	770	512	27	19	1,387	80	5,951	8,775
Greater Than 2.00% Sulfur	968	0	968	0	1,075	252	34	1,361	11	3,718	3,828	140	45	7,742	140	441	10,652

Note. Total may not equal sum of components due to independent rounding.

Note. Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

**Table 30. Stocks of No.4 Fuel Oil and Residual Fuel Oil By Sulfur Content, December 1982**  
(Thousands of Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La. Ark.	New Mexico	Total	PAD Dist. IV Rocky Mts.		PAD Dist. V West Coast
<b>No. 4 Fuel Oil -- 0.00 to 0.30% Sulfur</b>																
Refinery .....	0	7	7	0	4	0	0	0	0	0	12	4	0	16	0	27
Bulk Terminal .....	474	0	474	0	0	0	0	0	0	0	0	0	0	0	0	474
Total .....	474	7	481	0	4	0	0	0	0	0	12	4	0	16	0	501
<b>No.4 Fuel Oil -- 0.31 to 0.50% Sulfur</b>																
Refinery .....	0	0	0	0	8	0	0	6	0	0	1	0	0	7	5	22
Bulk Terminal .....	70	0	70	0	0	0	0	0	0	0	1	0	0	1	0	71
Total .....	70	0	70	0	8	0	0	6	0	0	2	0	0	8	5	93
<b>No. 4 Fuel Oil -- 0.51 to 1.00% Sulfur</b>																
Refinery .....	0	0	0	0	12	0	0	28	236	19	3	58	344	0	23	379
Bulk Terminal .....	398	0	398	0	63	0	0	0	0	11	0	0	11	0	0	472
Total .....	398	0	398	0	75	0	0	28	236	30	3	58	355	0	23	851
<b>No. 4 Fuel Oil -- 1.01 to 2.00% Sulfur</b>																
Refinery .....	0	0	0	0	0	0	0	3	0	0	0	0	3	3	15	21
Bulk Terminal .....	393	0	393	0	0	0	0	0	0	0	0	0	0	0	37	430
Total .....	393	0	393	0	0	0	0	3	0	0	0	0	3	3	52	451
<b>No.4 Fuel Oil -- Greater Than 2.00% Sulfur</b>																
Refinery .....	0	0	0	0	13	0	0	0	0	116	74	0	190	0	18	221
Bulk Terminal .....	70	0	70	8	0	0	0	14	0	55	0	0	69	0	0	147
Total .....	70	0	70	8	13	0	0	14	0	171	74	0	259	0	18	368
<b>Residual Fuel Oil -- 0.00 to 0.30% Sulfur</b>																
Refinery .....	590	25	615	0	5	0	6	58	275	42	12	15	402	109	523	1,660
Bulk Terminal .....	4,490	0	4,490	0	25	0	0	0	0	2,506	2	0	2,508	0	0	7,023
Total .....	5,080	25	5,105	0	30	0	6	58	275	2,548	14	15	2,910	109	523	8,683
<b>Residual Fuel Oil -- 0.31 to 0.50% Sulfur</b>																
Refinery .....	847	4	851	0	104	0	6	3	25	8	97	0	133	51	1,115	2,260
Bulk Terminal .....	2,981	0	2,981	0	24	0	0	0	26	0	0	0	26	0	0	3,031
Total .....	3,828	4	3,832	0	128	0	6	3	51	8	97	0	159	51	1,115	5,291
<b>Residual Fuel Oil -- 0.51 to 1.00% Sulfur</b>																
Refinery .....	1,541	0	1,541	111	861	0	70	150	1,116	1,431	15	4	2,716	136	1,157	6,592
Bulk Terminal .....	7,056	80	7,136	66	509	11	24	117	246	279	0	0	842	0	322	8,710
Total .....	8,597	80	8,677	177	1,370	11	94	1,652	1,362	1,710	15	4	3,358	136	1,479	15,302
<b>Residual Fuel Oil -- 1.01 to 2.00% Sulfur</b>																
Refinery .....	503	108	611	0	659	139	62	66	567	632	14	0	1,279	52	4,295	7,097
Bulk Terminal .....	2,815	418	3,233	87	394	107	474	0	512	435	22	0	969	0	1,016	6,280
Total .....	3,318	526	3,844	87	1,053	246	536	66	1,079	1,067	36	0	2,248	52	5,311	13,377
<b>Residual Fuel Oil -- Greater than 2.00% Sulfur</b>																
Refinery .....	982	0	982	0	871	240	15	40	3,167	2,347	141	21	5,716	286	530	8,640
Bulk Terminal .....	12,215	79	12,294	0	155	52	145	84	832	949	17	0	1,882	0	336	14,864
Total .....	13,197	79	13,276	0	1,026	292	160	124	3,999	3,296	158	21	7,598	286	866	23,504
<b>Residual Fuel Oil -- Sulfur Content Not Specified</b>																
Pipeline .....	0	0	0	0	0	0	0	0	1	0	0	0	1	0	17	18
Total .....	0	0	0	0	0	0	0	0	1	0	0	0	1	0	17	18

Note: Total may not equal sum of components due to independent rounding.  
Sources: See Explanatory Notes on Data Collection and Estimation.

Table 31. Imports of Residual Fuel Oil by sulfur Content by Country of Origin, December 1982  
(Thousands of Barrels)

Country	Residual Fuel Oil						Total
	0.00 to 0.30%	0.31 to 0.50%	0.51 to 1.00%	1.01 to 2.00%	Greater Than 2.00%	Not Specified	
<b>Arab OPEC</b>							
Algeria	1,518	195	0	0	15	0	1,728
Iraq	0	0	0	0	0	0	0
Kuwait	0	0	0	0	0	0	0
Qatar	0	0	0	0	0	0	0
Saudi Arabia	0	0	0	0	0	0	0
United Arab Emirates	0	0	0	0	0	0	0
Subtotal Arab OPEC	1,518	195	0	0	15	0	1,728
<b>Other OPEC</b>							
Ecuador	316	0	0	0	0	0	316
Gabon	0	0	0	0	0	0	0
Indonesia	494	10	0	0	0	0	504
Iran	0	0	0	0	0	0	0
Nigeria	344	0	0	0	0	0	344
Venezuela	618	0	340	380	2,732	0	4,069
Subtotal Other OPEC	1,771	10	340	380	2,732	0	5,233
<b>Other</b>							
Angola	0	389	0	0	0	0	389
Australia	1	0	0	0	253	0	254
Bahamas	203	0	0	195	723	0	1,121
Bolivia	0	0	0	0	0	0	0
Brazil	312	0	49	0	0	0	361
Brunei	0	0	0	0	0	0	0
Canada	32	0	273	176	10	0	491
Congo	0	174	0	0	0	0	174
Egypt	0	0	0	0	0	0	0
France	0	0	0	0	0	0	0
Ghana	0	0	0	0	0	0	0
Liberia	0	0	0	0	0	0	0
Malaysia	0	0	0	0	621	0	621
Mexico	0	0	0	0	0	0	0
Netherlands	(s)	0	0	0	217	0	217
Netherlands Antilles	0	0	0	148	4,542	0	4,689
Norway	0	0	0	0	0	0	0
Oman	0	0	0	0	0	0	0
People's Republic of China	0	28	0	6	0	0	35
Peru	257	0	527	0	0	0	784
Puerto Rico	0	0	0	0	0	0	0
Spain	0	504	0	0	0	0	504
Syria	0	0	0	0	0	0	0
Trinidad	0	0	0	448	47	0	495
Tunisia	0	0	0	0	0	0	0
United Kingdom	0	0	49	0	239	0	289
Virgin Islands	600	628	1,533	201	973	0	3,936
Yugoslavia	0	0	0	0	0	0	0
Zaire	0	0	0	0	0	0	0
Other Western Hemisphere	0	83	277	0	196	0	556
Other Eastern Hemisphere	742	222	225	106	0	0	1,294
Subtotal Other	2,147	2,027	2,934	1,280	7,821	0	16,208
<b>Total Imports</b>	<b>5,436</b>	<b>2,232</b>	<b>3,274</b>	<b>1,660</b>	<b>10,567</b>	<b>0</b>	<b>23,170</b>

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.  
Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 32. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, December 1982**  
(Thousands of Barrels)

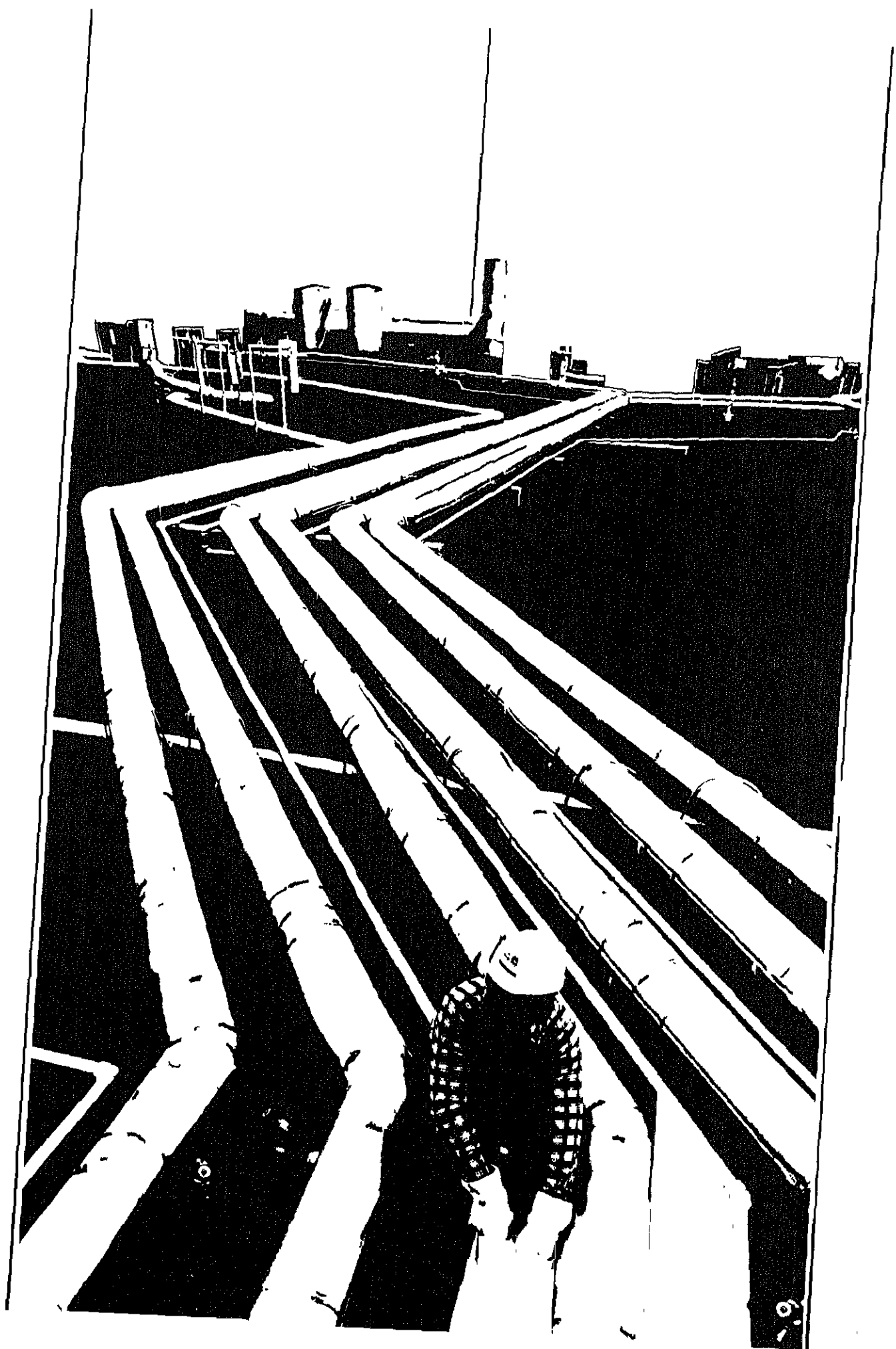
State	Residual Fuel Oil						Total
	0.00 to 0.30%	0.31 to 0.50%	0.51 to 1.00%	1.01 to 2.00%	Greater Than 2.00%	Not Specified	
<b>PAD District I</b>	<b>4,317</b>	<b>1,468</b>	<b>2,706</b>	<b>1,478</b>	<b>10,343</b>	<b>0</b>	<b>20,311</b>
Connecticut	0	0	0	0	217	0	217
Delaware	359	0	0	0	0	0	359
Florida	0	0	284	0	428	0	712
Georgia	0	0	0	0	31	0	31
Maine	0	0	0	593	1,042	0	1,634
Maryland	0	0	358	329	432	0	1,119
Massachusetts	0	0	0	0	2,815	0	2,815
New Jersey	557	110	609	50	1,418	0	2,743
New York	3,144	1,252	833	408	2,347	0	7,986
North Carolina	0	0	263	25	240	0	503
Pennsylvania	257	105	359	0	424	0	1,170
Rhode Island	0	0	0	0	51	0	51
South Carolina	0	0	0	0	315	0	315
Virginia	0	0	0	74	584	0	657
<b>PAD District II</b>	<b>6</b>	<b>0</b>	<b>228</b>	<b>61</b>	<b>10</b>	<b>0</b>	<b>305</b>
Michigan	6	0	228	0	0	0	234
Minnesota	0	0	0	26	6	0	33
North Dakota	0	0	0	35	4	0	39
<b>PAD District III</b>	<b>1,082</b>	<b>504</b>	<b>340</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,926</b>
Louisiana	2	504	340	0	0	0	845
Texas	1,081	0	0	0	0	0	1,081
<b>PAD District IV</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>9</b>
Montana	0	0	0	9	0	0	9
<b>PAD District V</b>	<b>31</b>	<b>261</b>	<b>(<sup>a</sup>)</b>	<b>112</b>	<b>214</b>	<b>0</b>	<b>618</b>
California	0	0	0	0	214	0	214
Hawaii	5	261	( <sup>a</sup> )	112	0	0	378
Washington	26	0	0	0	0	0	26
<b>All PAD Districts</b>	<b>5,436</b>	<b>2,232</b>	<b>3,274</b>	<b>1,660</b>	<b>10,567</b>	<b>0</b>	<b>23,170</b>

(<sup>a</sup>) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.







## Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group,  $\text{CH}-(\text{CH})_n-\text{OH}$ . "Alcohol" includes ethanol and methanol.

**Asphalt.** A dark-brown-to-black cement-like material, containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor is 42-gallon barrels per short ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Aviation Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

**Aviation Gasoline (Finished).** All special grades of gasoline for use in aviation reciprocating engines as given in ASTM Specification D 910 and Military Specification MIL-G-5572.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt, and wax to barrels are given in the definitions for these products.

**Butane.** A normally gaseous paraffinic hydrocarbon,  $\text{C}_4\text{H}_{10}$ . It is extracted from natural gas or refinery gas streams. Butane is covered by ASTM Specification D1835 and Gas Processors Association Specification for commercial butane.

- **Normal Butane**—A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of  $31.1^\circ\text{F}$ . This classification includes mixtures of gases that contain 80 percent or more normal butane.
- **Other Butanes**—All butanes not included as normal butane or isobutane.

**Butane-Propane Mixtures.** Mixtures consisting exclusively of butane and propane that conform to ASTM Specification D1835 and Gas Processors Association Specification for commercial butane-propane. They are extracted from natural gas and refinery gas streams.

**Butylene.** An olefinic hydrocarbon,  $\text{C}_4\text{H}_8$ , recovered from refinery processes. It is reported in the "Butane" category.

**Coal.** A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. Includes lignite, bituminous coal, and anthracite which conform to ASTM Specification D 388.

**Crude Oil (including Lease Condensate).** A mixture of hydrocarbons that existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Lease condensate is included. Drips are also included, but topped crude (residual) oil and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign, according to the following:

- **Domestic**—Crude oil produced in the United States or from its outer continental shelf as defined in 48 U.S.C. 1331. Hydrocarbons such as shale oil and tar sand oil are included.
- **Foreign**—Crude oil produced outside the United States. Imported Athabasca hydrocarbons are included.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1 and No. 2 heating oils, No. 1 and No. 2 diesel fuel oils, and No. 4 fuel oil.

- **No. 1 Fuel Oil**—A light distillate fuel oil intended for vaporizing pot-type burners. ASTM Specification D 396 specifies for this grade maximum distillation temperatures of 400° F. at the 10-percent point and 550° F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100° F.

- **No. 2 Fuel Oil**—A distillate fuel oil for domestic heating for use in atomizing-type burners or for moderate capacity commercial-industrial burner units. ASTM Specification D 396 specifies for this grade temperatures at the 90-percent point between 540° and 640° F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100° F.

- **No. 1 and No. 2 Diesel Fuel Oils**—Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D 975:

1. **No. 1-D**—A volatile distillate fuel oil in the 400° to 550° F. boiling range for engines in service requiring frequent speed and load changes. Type C-B diesel fuel, which is used for city buses and similar operations, is included.

2. **No. 2-D**—A distillate fuel oil of lower volatility in the 540° to 640° F. boiling range for engines in industrial and heavy mobile service. Type R-R diesel fuel for railroad compression-ignition engines and Type T-T for diesel-engine trucks are included.

- **No. 4 Fuel Oil**—A fuel oil for commercial burner installations not equipped with preheat facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil or residual fuel oil stocks that conforms to ASTM Specification D 396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100° F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D 975.

**Eastern Hemisphere.** That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa, and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

**Electric Energy (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ethane.** A normally gaseous paraffinic hydrocarbon,  $C_2H_6$ , extracted from natural gas and refinery gas streams. "Ethane" includes any product containing 90 percent liquid volume or more ethane.

**Ethane-Propane Mixtures.** Mixtures of ethane and propane in which neither component is 90 percent or more of the liquid volume. It is extracted from natural gas and refinery gas streams.

**Ethylene.** An olefinic hydrocarbon,  $C_2H_4$ , recovered from refinery and petrochemical processes. It is reported in the "Ethane" category.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

**Gas Well Gas.** Natural gas produced from gas wells. Such gas may be either associated gas or non-associated gas.

- **Associated Gas**—Free natural gas in immediate contact, but not in solution, with crude oil in the reservoir.

- **Non-Associated Gas**—Free natural gas not in contact with, nor dissolved in, crude oil in the reservoir.

**Imported Crude Oil Burned as Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. "Imported crude oil burned as fuel" includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and oil shale.

**Isobutane.** A saturated branch-chain isomer of butane. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. This classification includes mixtures of gases that contain 80 percent liquid volume or more isobutane. It is extracted from natural gas and refinery gas streams.

**Isopentane.** A saturated branch-chain hydrocarbon,  $C_5H_{12}$ , obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Kerosene.** A petroleum distillate that boils at a temperature between 300° and 550° F., that has a flash point higher than 100° F. by ASTM Method D 56, that has a gravity range from 40° to 46° API, and that has a burning point in the range of 150° to 175° F. It is a clean-burning product suitable for use as an illuminant when burned in wick lamps. Includes grades of kerosene called range oil having properties similar to No. 1 fuel oil, but with a gravity of about 43° API and having a maximum end-point of 625° F. Kerosene is used in space heaters, cook stoves, and water heaters.

**Kerosene-Type Jet Fuel.** A quality kerosene product with an average gravity of 40.7° API, a 10 percent distillation temperature of 400° F., and an end-point of 572° F. It is covered by ASTM Specification D 1655 and Military Specification MIL-T-5624L (Grade JP-5 and JP-8). It is used primarily for commercial turbojet and turboprop aircraft engines.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and non-associated) by lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Lease Separator.** A surface facility used for separating casinghead gas from produced crude oil and water and separating gas from that portion of associated gas and non-associated gas that liquefies at the temperature and pressure conditions of the separator.

**Liquefied Petroleum Gases (LPG).** Propane, propylene, butanes, butylene, ethane-propane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids. Formerly called "Liquefied Gases."

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane and/or ethylene, propane and/or propylene, butane and/or butylene, butane-propane mixtures, and isobutane. Excludes still gases used for chemical or rubber manufacture which are reported as petrochemical feedstocks and also excludes liquefied gases ready for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstocks, other uses, or both.

**Lubricants.** A substance used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. "Lubricants" includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. The three categories reported are:

- **Bright Stock**—A refined, high viscosity lubricating oil base stock that is usually made from residuum by a treatment such as deasphalting, acid treatment, or solvent extraction.
- **Neutral**—A distillate lubricating oil base stock with a viscosity that is usually not above 55 Saybolt Universal Seconds (SUS) at 100° F. It is prepared by a treatment such as hydrofining, acid treatment, or solvent extraction.
- **Other**—A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

**Miscellaneous Products.** Includes all finished products not classified elsewhere. "Miscellaneous products" include petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and other finished products.

**Motor Gasoline Blending Components.** Finished components in the gasoline range that will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

**Motor Gasoline (Finished).** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines.

engines. Specifications for motor gasoline, as given in ASTM Specification D 439 or Federal Specification VV-G-1690B, include a boiling range of 122° to 158° F. at the 10-percent point to 365° to 374° F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. "Motor gasoline" includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

- **Finished Leaded Gasoline**—Contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating.
- **Finished Unleaded Gasoline**—Contains up to 0.05 grams of lead per gallon and 0.005 grams of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating.
- **Gasohol**—A blend of alcohol and finished motor gasoline that is no more than 90 percent of finished motor gasoline (leaded or unleaded as described above) and no less than 10 percent or more alcohol (ethanol or methanol).

**Motor Gasoline (Total).** Includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range with an average gravity of 52.8° API and 20 to 90 percent distillation temperatures of 290° to 470° F., meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. This category excludes ram-jet and petroleum rocket fuels, which are included in the "Miscellaneous Products" category.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, butane, natural gasoline, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials, and are classified as follows: Ethane, propane, ethane-propane mix, isobutane, butane, butane-propane mix, isopentane, natural gasoline, plant condensate, unfractionated stream, and other products from natural gas processing plants (i.e., products meeting the standards of finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gas Processing Plant.** A facility designed to recover natural gas liquids from a stream of natural gas that may or may not have been processed through lease separators or natural gas field facilities. The facility also controls the quality of natural gas to be marketed. Cycling plants are classified as gas processing plants.

**Natural Gasoline.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Producers Association.

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, oil-producing and-exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**Operable Distillation Capacity.** The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and

grades of inputs, limitations of downstream facilities, scheduled and unscheduled downtimes, and environmental constraints. Includes any shutdown capacity that could be placed in operation within 90 days.

**Other Hydrocarbons.** Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal, tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Petrochemical Feedstocks.** Chemical feedstocks derived from petroleum, principally for the manufacture of synthetic rubber and a variety of plastics. The categories reported are "Naphtha-less than 400° F. end-point" and "Other oils over 400° F. end-point."

- **Naphtha less than 400° F. end-point**—A naphtha with an end point of less than 400° F. and that is reported as used as a petrochemical feedstock.

- **Other oils over 400° F. end-point**—Oils with an end point over 400° F. and that are reported as used as a petrochemical feedstock.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is 5 42-gallon barrels per short ton.

- **Marketable Coke**—Those grades of coke that are produced in delayed or fluid cokers and which may be recovered as relatively pure carbon. This "green" coke may be sold or further purified by calcining.

- **Catalyst Coke**—In many catalytic operations (i.e., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as fuel in the refinery process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, ethane, liquefied petroleum gases, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils-over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas plant liquids, other hydrocarbons, and alcohol.

**Plant Condensate.** One of the natural gas plant liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Primary Stocks.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. "Primary Stocks" excludes stocks of foreign origin that are held in bonded warehouse storage.

**Propane.** A normally gaseous hydrocarbon,  $C_3H_8$  extracted from natural gas and refinery gas streams. It is used primarily as a fuel and as a petrochemical feedstock. Propane is covered by ASTM Specification D1835, Gas Processors Association for commercial and HD-5 propane, and ASTM Specification for special duty propane.

**Propylene.** An olefinic hydrocarbon,  $C_3H_6$ , recovered from refinery and petrochemical processes. It is reported in the "Propane" category.

**Residual Fuel Oil.** Topped crude of refinery operations. "Residual Fuel Oil" includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D 396 and Federal Specification VV-F-815C; Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2; Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Imports of residual fuel oil include "Imported Crude Oil Burned as Fuel."

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oils, used as a dust palliative and surface treatment of roads and highways. It is generally produced in six grades; from 0, the most liquid, to 5, the most viscous.

**Special Naphthas.** All finished products within the gasoline range that are used as paint thinners, cleaners, and solvents. These products are refined to a specified flash point and have a boiling range of 90° to 220° F. "Special naphthas" includes all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D 484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam that is purchased for use by a refinery that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and refinery fuel use.

- **Petrochemical Feedstock Use**—Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc. are considered petrochemical products; therefore, only their feedstock equivalents are included.

- **Fuel Use**—All other still gas.

**Strategic Petroleum Reserve (SPR).** Stocks (currently, only crude oil) maintained by the Federal Government for use during periods of major supply interruption.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending.

**Unfractionated Stream.** Mixtures of unsegregated natural gas plant liquid components excluding those included in plant condensate. This product is extracted from natural gas.

**Wax.** A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is a light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades reported are microcrystalline, crystalline—fully refined, and crystalline—other. The conversion factor is 280 pounds per 42-gallon barrel.

- **Microcrystalline Wax**—Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

  - Penetration at 77° F. (D-1321)—60 maximum.

  - Viscosity at 210° F. in Saybolt Universal Seconds (SUS)

    - (D-88)—60 SUS (10.22 centistokes) minimum to 150

    - SUS (31.8 centistokes) maximum.

  - Oil content (D-721)—5 percent minimum.

- **Crystalline-Fully Refined Wax**—A light-colored paraffin wax having the following characteristics:

  - Viscosity at 210° F.

    - (D-88)—59.9 SUS (10.18 centistokes) maximum.

  - Oil Content (D-721)—0.5 percent maximum.

  - Other +20 color, Saybolt minimum.

- **Crystalline-Other Wax**—A paraffin wax having the following characteristics:

  - Viscosity at 210° F. (D-88)—59.9 SUS (10.18 centistokes) maximum.

  - Oil Content (D-721)—0.51 percent minimum to 15 percent maximum.

**Western Hemisphere.** That half of the earth that includes North and South America and the surrounding waters.

# Bureau of Mines Petroleum Refining Districts and PAD Districts

## PAD District

## Refining District

I

**East Coast**—District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian #1**—The State of West Virginia, those parts of the States of Pennsylvania and New York not included in the East Coast District.

**Appalachian #2**—The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

II

**Indiana—Illinois—Kentucky**—The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

**Minnesota—Wisconsin—North and South Dakota**—The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma—Kansas—Missouri**—The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

**Texas Inland**—The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast**—The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

III

**Louisiana Gulf Coast**—The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana—Arkansas**—The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico**—The State of New Mexico.

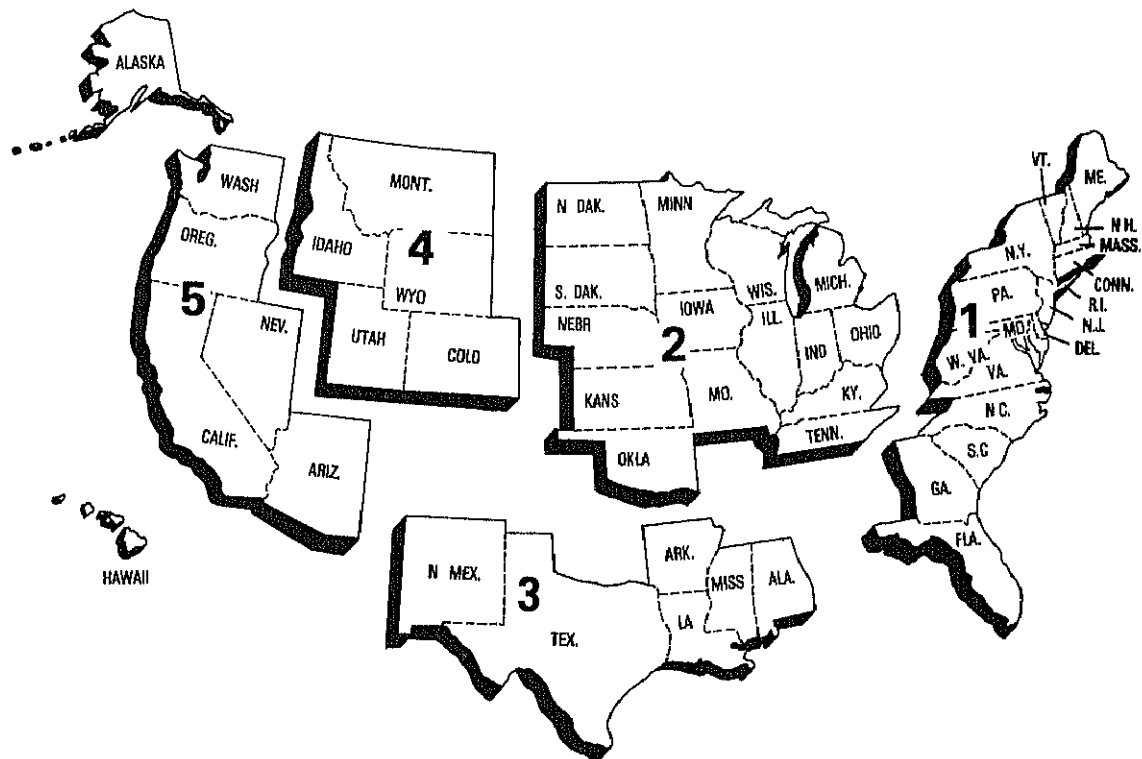
IV

**Rocky Mountain**—The States of Montana, Idaho, Wyoming, Utah, and Colorado.

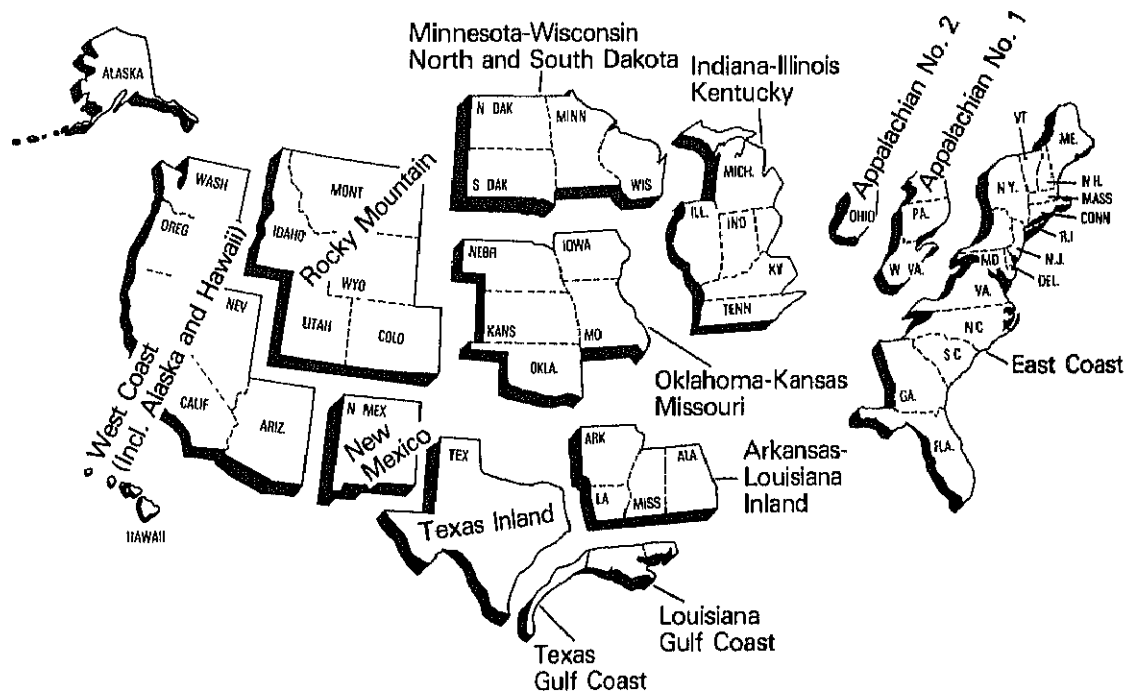
V

**West Coast**—The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

## Petroleum Administration for Defense (PAD) Districts

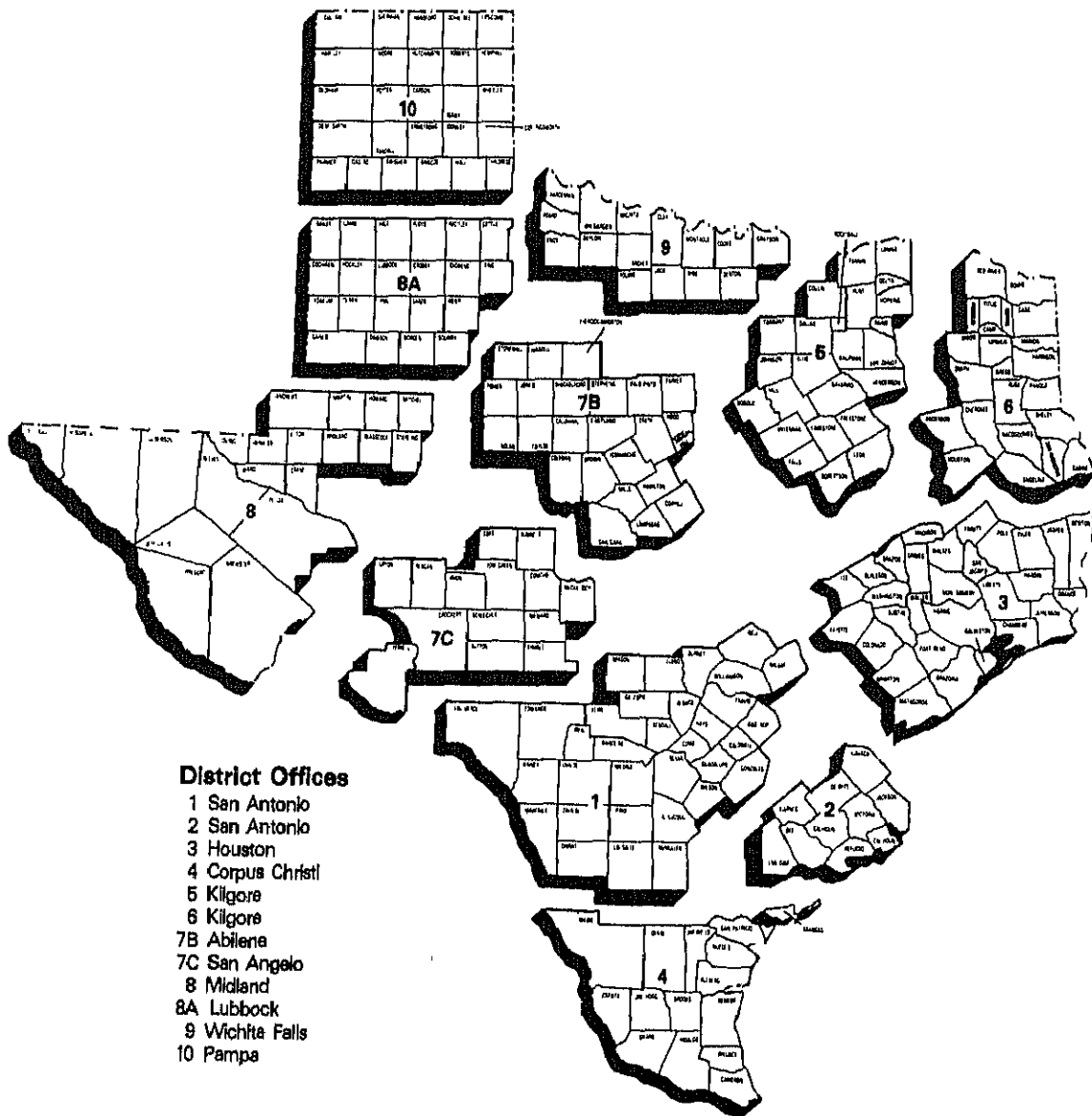


## Bureau of Mines Refining Districts

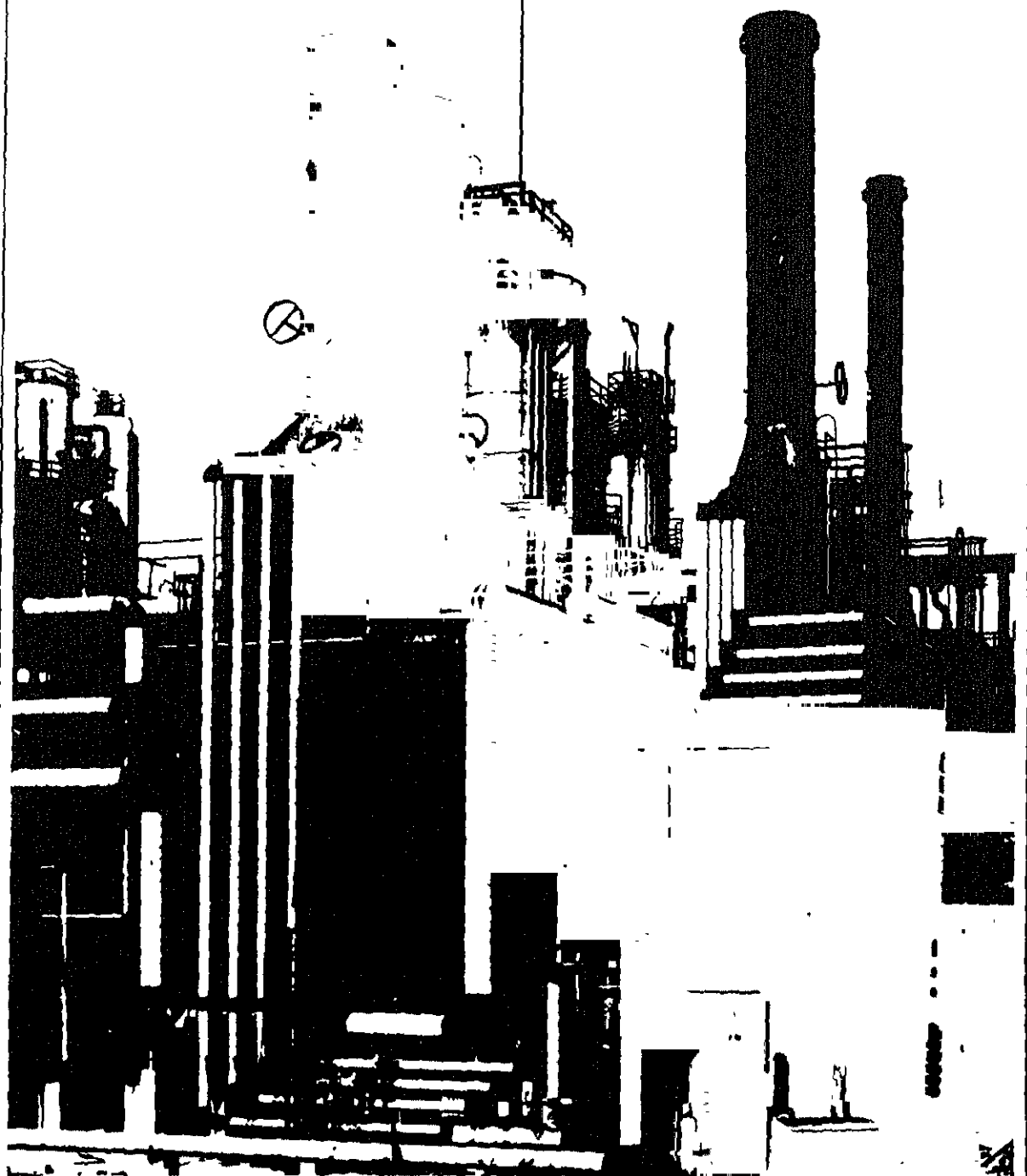




## District Map Oil and Gas Division Railroad Commission of Texas



# Explanatory Notes



# Explanatory Notes

## Note 1.1 EIA-64: Natural Gas Liquids Operations Report

### Background

The EIA-64, "Natural Gas Liquids Operations Report" evolved from a survey designed and conducted by the United States Geological Survey beginning in 1911. This form collects data on the production and storage of natural gas plant liquids at natural gas processing plants and fractionators.

### Description of Survey

#### Universe

The universe includes all operators of facilities designed to: (1) extract liquid hydrocarbons from natural gas streams (natural gas processing plants); (2) separate a combined products liquid hydrocarbon stream into its component products, i.e. propane, butane, natural gasoline, etc. (fractionators); or (3) store the liquid hydrocarbon output of plants and fractionators.

The mailing list is automated. It is maintained by matching periodically with the *LP Gas Almanac* listings (including supplements) and the *Oil and Gas Journal* Processing Plant Survey listings, and by making changes reported by the respondents.

#### Information Collected

The data are submitted monthly by facility and include all products that the company controls through possession, regardless of ownership. The main items of information collected by the EIA-64 are shown by the example of the form presented below.

#### Collection Methods

Completed reports are required to be postmarked 20 days following the last day of the report month. Follow-up telephone calls are made to nonrespondents in order to collect data before publication of the aggregated data.

#### Imputing Missing Data

Imputation is performed only for companies that submitted a report in the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. The value of shipments is adjusted to balance stock level, production, receipts, plant fuel use, and losses. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates, if necessary, to be followed by a resubmission of actual data.

#### Response Rates

The initial response rate averages 85 percent, with a final response averaging 98 percent as a result of telephone follow-up procedures.

#### Data Processing

Upon receipt, the reports are reviewed for identification section omissions, duplicate submissions, and identification information changes. The data are then entered and edited. The edit program includes checks for invalid data entry codes, range checks for current-month to previous-month changes (absolute and relative), arithmetic calculation errors, line balancing errors, etc. Telephone calls are made to respondents to resolve questions.

## Note 1.2 EIA-87, 88, 89 and 90: Joint Petroleum Reporting System

### Background

The Joint Petroleum Reporting System (JPRS) comprises four surveys: the "Refinery Report" (EIA-87); the "Bulk Terminal Stocks Report" (EIA-88); the "Pipeline Products Report" (EIA-89); and the

**U.S. Department of Energy  
Energy Information Administration  
Mail Station, BG-086 Forstl  
Washington, D C. 20585**

## Natural Gas Liquids Operations Report

This Report is Mandatory Under Public Law 93-275. Failure to Comply may Result in Criminal Fines, Civil Penalties and Other Sanctions as Provided by Law.

Report Type	EIA Company Identification Number	Report Date (Last Day of Reporting Month)	Zip Code of Plant Location	If Resubmission Insert X in Block

Farm Approved  
OMB No 1905-0109

For DOE Use Only

Plant Name

## Section 1. Natural Gas Processing Plant and Fractionator Operations (Barrels of 42 Gallons)

[illegible]

"Crude Oil Stocks Report" (EIA-90). This group of forms collects data on petroleum refinery operations and on storage of crude oil and petroleum products. The origins of JPRS lie in the voluntary petroleum reporting systems instituted by the Bureau of Mines (BOM) soon after it was established as a part of the Department of the Interior in May 1910.

## **Description of Survey**

### **Universe**

The respondent universe of each JPRS survey is defined as follows:

**EIA-87:** All petroleum refineries and plants producing finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Hawaiian Foreign Trade Zone, and Guam.

**EIA-88:** All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline regardless of ownership of the material.

**EIA-89:** All products pipeline companies that carry petroleum products (including interstate, intrastate and intracompany pipelines) in the 50 States and the District of Columbia.

**EIA-90:** Crude oil pipeline companies (gathering and trunk pipeline companies), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water (in excess of 1,000 barrels), regardless of ownership in the 50 States and the District of Columbia.

The list of respondents is kept current by checking for new respondents in the *Oil and Gas Journal* weekly magazine; newspaper articles; the Office of Resource Applications publication "Trends in Refinery Capacity & Utilization;" the Office of Refinery Operations (ERA) list of U.S. Refiners; and the annual survey EIA-177 "Capacity of Petroleum Refineries."

### **Information Collected**

The main items of information collected by EIA-87, are shown by the example presented below. The EIA-88 and EIA-89 collect data on petroleum product stocks. The EIA-90 collects data on crude oil stocks and crude oil used directly as fuel.

### **Collection Methods**

The data for the JPRS surveys are collected on a monthly basis. Completed forms are required to be postmarked by the 20th day following the report month. Telephone follow-up calls are made to nonrespondents in order to collect data before publication deadline. An automated mailing list is maintained and is used to monitor receipt of the forms.

### **Imputing Missing Data**

Imputation is performed only for companies that submitted a report in the previous month. For these companies, the previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. The value of shipments is adjusted to balance stock level, production receipts, and losses. In the event that previous month's data were estimated, the respondent is contacted and requested to submit estimates if necessary, to be followed by a resubmission of actual data.

### **Response Rates**

As of the filing deadline, the response rate of the JPRS respondents is over 90 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Thirty calendar days after the report month, data for companies that still fail to file the form are estimated based on prior month's data. Names of companies that fail to file for two consecutive months are forwarded to DOE for further noncompliance action. Final response rate is 100 percent.

Report Type **B 0 1** EIA Company Identification No Report Period   
Yr Mo.**SECTION 6. REFINERY STOCKS, RECEIPTS, INPUTS, PRODUCTION, SHIPMENTS AND REFINERY FUEL USE AND LOSSES**  
(Thousands of Barrels of 42 Gallons)

ITEM DESCRIPTION	PRO DUCT CODE	STOCKS BEGINNING OF MONTH A	RECEIPTS DURING MONTH B	INPUTS DURING MONTH C	PRODUCTION DURING MONTH D	SHIPMENTS DURING MONTH E	REFINERY FUEL USE AND LOSSES DURING MONTH F	STOCKS END OF MONTH G
Crude oil (incl. lease condensate) Total (sum of codes 010 and 020)	050				X			
Domestic (incl. Alaskan)	010	X		X	X	X	X	X
Foreign	020	X		X	X	X	X	X
Alaskan	011	X		X	X	X	X	X
Products of natural gas proc. plants								
Ethane	110				X			
Propane	231				X			
Ethane-propane mixtures	241				X			
Isobutane	233				X			
Normal butane	235				X			
Other butanes	236				X			
Butane-propane mixtures	234				X			
Natural gasoline and isopentane	220				X			
Plant condensate	210				X			
Unfractionated stream	227				X			
Other hydrocarbons and hydrogen	090				X			
Alcohol	091				X			
Unfinished oils	812							
Gasoline								
Finished leaded, motor	132							
Finished unleaded, motor	133							
Blending components, motor	134							
Gasohol	135							
Finished aviation	111							
Blending components aviation	112							
Special naphthas (solvents)	061							
Jet fuel								
Naphtha type	211							
Kerosene type	213							
Kerosene (incl. range oil)	311							
Distillate fuel oil, Less No. 4	412							
No. 4 fuel oil	414							
Residual fuel oil	511							
Lubricating oils								
Bright stock	853							
Neutral	855							
Other	859							
Asphalt	900							
Wax								
Microcrystalline	061							
Crystalline fully refined	071							
Crystalline other	081							
Petroleum coke								
Marketable	021							
Catalyst	022							
Road oil	031							
Sulfur gas								
Petrochemical feedstock use	042	X						X
Other use	044	X						X
Ethane and/or ethylene								
Petrochemical feedstock use	612							
Other use	652							
Propane and/or propylene								
Petrochemical feedstock use	613							
Other use	653							
Butane and/or butylene								
Petrochemical feedstock use	614							
Other use	654							
Butane-propane mixtures								
Petrochemical feedstock use	616							
Other use	656							
Isobutane petrochemical feedstock use	615							
Naphtha—less than 400° end point								
Petrochemical feedstock use	822							
Other oils—over 400° end point								
Petrochemical feedstock use	824							
Other finished products								
Non-fuel use	097							
Fuel Use	098							
Overage (Inputs) or shortage (production)	911	X	X			X	X	X
TOTAL	999	X	X			X	X	X

## **Note 1.3 EIA-161, 162, 163, 164 and 165: Weekly Petroleum Reporting System**

### **Background**

The Weekly Petroleum Reporting System (WPRS) comprises five surveys: the "Refinery Report" (EIA-161); the "Bulk Terminal Stocks Report" (EIA-162); the "Pipeline Product Stock Report" (EIA-163); the "Crude Oil Stocks Report" (EIA-164); and the "Imports Report" (EIA-165).

The EIA weekly reporting system was designed to collect data similar to those collected under the monthly Joint Petroleum Reporting System (JPRS) (See Note 1.2). In the WPRS, selected petroleum companies report weekly data to EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On the Forms EIA-161 through EIA-164, companies report data on a custody basis. On the Form EIA-165, the importer of record reports each shipment entering the United States. Current weekly data and the most recent monthly data from the JPRS are used to estimate the published weekly totals.

### **Description of Survey**

#### **Universe**

The sample of companies that report weekly in the WPRS was selected from the universe of companies that report monthly in either the JPRS system or the ERA-60 system (for imports). All sampled companies report data only for facilities in the 50 States and the District of Columbia.

The sampling frame for each weekly survey is defined as follows:

**EIA-161:** Uses the EIA-87 universe, which includes all petroleum refineries in the United States and its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and bulk terminals that blend motor gasoline.

**EIA-162:** Uses the EIA-88 universe, which includes all bulk terminal facilities in the United States and its territories that have total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline.

**EIA-163:** Based on the EIA-89 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that only transport natural gas liquids are not included in the EIA-163 frame. Only those pipeline companies which transport products covered in the weekly survey are included.

**EIA-164:** Uses the EIA-90 universe, which consists of all trunk pipeline companies in the United States and its territories which transport crude oil, all refining companies, all crude oil producers, all terminal operators, and all storers of 1,000 barrels or more of crude oil.

**EIA-165:** Uses the ERA-60 universe, which includes all importers of record of crude oil and petroleum products into the United States and Puerto Rico.

#### **Sampling**

The sampling procedure used for the weekly system is the cut-off method. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous period. Companies are chosen for the sample beginning with the largest and adding companies until the total sample covers about 90 percent of the total for the previous time period.

#### **Collection Methods**

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. All canvassed firms and terminal operating companies must file by 5:00 p.m. on the Monday following the close of the report period, 7 a.m. Friday. During the processing week, company corrections of the prior week's data are also entered.

## Formula and Calculations

After the company reports have been checked and entered into the weekly data base, ratio estimates of the weekly totals are calculated from the reported data.

First, the current week's data for a given product reported by companies in that region are summed. (Call this weekly sum,  $W_s$ ) Next, the most recent month's data for the product reported by those same companies are summed. (Call this monthly sum,  $M_s$ ). Finally, let  $M_t$  be the sum of the most recent month's data for the product as reported by *all* companies. Then, the current week's ratio estimate for that product for all companies is given by.

$$W_t = \frac{M_t}{M_s} \circ W_s$$

This procedure is used directly to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Under such conditions, the ratio method is known to result in large errors. Hence, a number of other procedures for estimating weekly imports were considered. The average ratio method was selected for estimating imports because it produces estimates that were close to benchmark values computed from monthly data. Estimates are obtained using the ratio method, but with each company in turn omitted from the sample. These estimates are then averaged to obtain the average ratio estimate.

## Imputing Missing Data

The ratio method of estimation automatically imputes for nonresponse. Data from companies that do not respond are excluded from both the weekly and the monthly totals for the sampled companies.

## Response Rates

The response rate as of the day after the filing deadline is about 80 percent for the EIA-161; 75 percent for the EIA-162; 95 percent for the EIA-163; 80 percent for the EIA-164; and greater than 95 percent for the EIA-165. However, more forms are received the next day, bringing the final response rates up. Late respondents are contacted by telephone. Nearly all of the major companies report on time. The nonresponse rate for the published estimates is usually between 2 percent and 5 percent.

# Note 1.4 EIA-170: Tanker and Barge Shipments of Crude Oil and Petroleum Products Between Districts

## Background

The EIA-170 survey collects data for calculation of monthly petroleum supply and disposition figures on U.S. and PAD District levels.

## Instrument and Design

This form is designed to collect data on total movements by tanker and barge of crude oil and petroleum products between PAD Districts or between PAD Districts and the Panama Canal, by shipping State and receiving State.

## Universe

The respondent universe of the EIA-170 consists of all known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are currently about 60 respondents.



## **Collection Methods**

Survey data are collected by mail every month. The filing deadline is the 20th calendar day of the month following the report period. The response rate as of the filing deadline is about 98 percent. Late respondents are contacted by telephone. All responses are processed each month before release of the data for publication.

## **Note 1.5 ERA-60: Reports of Oil Imports into the United States and Puerto Rico**

### **Background**

The "Report of Oil Imports into the United States and Puerto Rico" (ERA-60) survey was designed by the Economic Regulatory Administration (ERA) of the Department of Energy to collect data on port of entry, country of origin, destination, and quantity of imported crude oil and petroleum products, as well as sulfur content and API gravity. All licensed importers and importers of record are required to report. The "Shipments of Refined Products from Puerto Rico to the United States" (P-133-M-O) survey was designed to collect data on imports to the United States that are not covered by the ERA-60.

### **Universe**

The monthly submission of Form ERA-60 and P-133-M-O is required by all licensed importers and importers of record into the United States and Puerto Rico. The respondent universe consisted of approximately 750 firms as of June 30, 1981. The respondent universe for these surveys is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

### **Collection Methods**

The survey data are collected by mail each month. It is mandatory for each respondent to file the ERA-60/P-133-M-O by the 15th working day of the month following the reporting period. Resubmissions are received frequently and are processed when received.

### **Response Rates**

In December 1980, the survey had a response rate of 92 percent by the filing deadline. The universe was 40 at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard followup of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. Response rate is generally 98-99% by the time the data are first published. Revised publications are not generated as standard operating procedure. The ERA-60 file is never closed; resubmissions are constantly received and processed.

## **Note 1.6 Census Import (IM-145) and Export (EM-522 and EM-594) Tabulations**

The foreign trade statistics program, conducted by the Bureau of the Census, involves compilation and dissemination of a large body of data relating to the imports and exports of the United States.

### **Report Statistics**

#### **Average**

The import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory (includes the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise shipped in transit through the United States, when documented with Customs as an intransit movement.
2. Shipments between the United States and Puerto Rico, the Virgin Islands, Guam, American Samoa, and other U.S. possessions; shipments between any of these outlying areas; and imports into U.S. possessions from foreign countries.
3. U.S. merchandise returned by U.S. Armed Forces for their own use.

#### **Source of Import Information**

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501- 7505).

Imported petroleum is reported as "Imports for Consumption." Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

#### **Country and Area of Origin**

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

### **Export Statistics**

#### **Coverage**

The export statistics reflect both government and nongovernment exports of domestic and foreign merchandise from the U.S. Customs territory (includes the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. Shipments between the United States and Puerto Rico, the Virgin Islands, Guam, American Samoa, and other U.S. possessions; between any of these outlying areas; and shipments from U.S. Possessions to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### **Source of Export Information**

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies Shipper's Export Declarations. Shipper's Export Declarations are required to be filed with Customs officials, except when qualified exporters have been authorized to submit data in the form of magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations directly to the Bureau of the Census.

#### **Country and Area of Destination**

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## Note 2 Estimation

The geographic coverage of all estimates is the 50 United States and the District of Columbia, including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

### Note 2.1 Supply

The components of petroleum supply are field production, refinery production, imports, stock withdrawal or addition, crude oil used directly, and losses.

**Field Production** is the sum of crude oil (including lease condensate) production, natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. Reports of crude oil production from each of the 31 producing States are not received until several months after the other components of petroleum supply described in Explanatory Note 2.1 are available for publication. For an explanation of the crude oil estimation procedure used until the State reports are complete, see Explanatory Note 2.2.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-64, "Natural Gas Liquids Operation Report." Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.1.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-64, "Natural Gas Liquids Operations Report." Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.1.

**Refinery Production** of LRGs, ethane, and finished petroleum products is reported monthly on survey Form EIA-87, "Refinery Report." Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month.

Refinery production is also reported weekly on survey Form EIA-161, "Refinery Report." See Explanatory Notes 1.2 and 1.3 for survey descriptions and other detail. It should also be noted that refineries do not report production of crude oil, natural gasoline, isopentane, unfractionated stream, plant condensate, or other hydrocarbons and alcohol.

**Imports** of crude oil and petroleum products are reported monthly on Form ERA-60, "Report of Oil Imports into the United States and Puerto Rico," and Form P-133-M-O, "Shipments of Refined Products (including unfinished oils) from Puerto Rico to the United States." In addition, the Census Bureau Tabulation IM-145 summarizes import data from Customs import declarations reported on Customs Forms 7501 and 7505. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum gases (LPG), where Census data show a much higher level of imports than Energy Information Administration data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and because LPGs are not licensed products. Therefore, respondents that only import LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-145. Additional data taken from the IM-145 are relatively small quantities of naphtha and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade and for military offshore use. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

Imports are also reported weekly on survey Form EIA-165, "Imports Report." See Explanatory Notes 1.3, 1.5, and 1.6 for survey descriptions and other detail.

**Stock Withdrawal (+) or Addition (-)** is calculated by subtracting stocks at the end of the month from stocks at the beginning of the month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and reduce petroleum supplies distributed for domestic consumption. For survey forms used to make stock withdrawal or addition calculations see Explanatory Note 2.4.

**Unaccounted-for Crude Oil** is a balancing item that represents the difference between crude oil supply and disposition. Crude oil supply is the sum of field production, imports and stock withdrawal or addition, less crude used directly and losses. Crude oil disposition is the sum of exports and refinery input.

Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A negative result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used. This calculation is performed for crude oil to ensure that product supplied for crude oil is always zero.

**Crude Oil Used Directly and Losses** is the sum of crude oil losses at refineries, crude oil burned at refineries, and crude oil burned on leases. Crude oil losses and consumption at refineries are reported on Form EIA-87, "Refinery Report." Crude oil burned on leases is reported on Form EIA-90, "Crude Oil Stocks Report." Crude oil burned on leases is divided into two categories: crude burned as residual fuel oil and crude burned as distillate fuel oil. Crude burned on leases appears as a negative supply to crude oil (a reduction in crude oil supplies) and as a positive supply to residual and distillate fuel oil (an increase to these supplies).

## Note 2.2: Domestic Crude Oil Production

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the individual State conservation agencies, which collect crude oil production values for tax purposes. In addition, the U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of six State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports from the State conservation agencies and the U.S. Geological Survey. The six States that do not report monthly values are Indiana, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their historical annual crude oil production values.

There is a time lag of approximately 3 to 4 months between the end of the reporting month and the time when the actual values are available for this publication. In order to provide more timely crude oil production estimates, the Department of Energy has established a series of statistical models that forecast the volume of crude oil production based on the historical production patterns. The models use Auto Regressive Integrated Moving Average (ARIMA) to analyze series of monthly crude oil production values collected over several years.

In order to provide detailed crude oil production information on both the PAD District level and for the major producing States, the total United States crude oil production volume was separated into nine distinct groupings. The nine different time series are the monthly reported crude oil production volumes for: (1) all the States in PAD District 1; (2) all the states in PAD District 2; (3) Texas; (4) Louisiana; (5) the States in PAD District 3 excluding Texas and Louisiana; (6) all the States in PAD District 4; (7) Alaska; (8) California; and (9) the States in PAD District 5 excluding Alaska and California. Monthly data collected beginning in January 1973 are used for each of these time series.

A separate ARIMA model is identified for each time series. New model parameters are estimated monthly for each of these nine updated time series. Then, these ARIMA models are used to forecast crude oil production volumes for the month of interest. These values are then aggregated into PAD District and national totals. The forecasts made during 1981 had an average error of less than 0.6 percent compared to the monthly crude oil production volumes eventually reported by the States.

## Note 2.3 Disposition

The components of petroleum disposition are refinery input, exports, and products supplied for domestic consumption.

**Refinery Inputs** of crude oil, NGPL and other liquids are reported monthly on survey Form EIA-87, "Refinery Report." Published inputs of unfinished oils, and motor and aviation gasoline blending components, equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production. Refinery inputs are also reported weekly on survey Form EIA-161, "Refinery Report." See Explanatory Notes 1.2 and 1.3 for survey description and other details.

**Exports** of crude oil and petroleum products are compiled from Census Bureau tabulations EM522 and EM594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-87.

**Product supplied** for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, plus crude oil used directly and losses (plus net receipts when calculated on a PAD District basis), minus refinery input, minus exports. This formula ensures that total disposition equals total supply. Products supplied indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative when total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) misreporting or delayed reporting of data, and (3) for calculations on a PAD District basis, incomplete coverage of interdistrict movements data compiled to calculate net receipts.

## Note 2.4 Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-87, "Refinery Report," and Form EIA-90, "Crude Oil Stocks Report." Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form 161, "Refinery Report," and Form EIA-164, "Crude Oil Stocks Report." Primary stocks of petroleum products are summed from data reported on the Form EIA-64, "Natural Gas Liquids Operations Report," Form EIA-87, "Refinery Report," Form EIA-88, "Bulk Terminal Stocks Report," and Form EIA-89, "Pipeline Products Stocks Report." Primary stocks of petroleum products do not include secondary stocks held by dealers and jobbers, or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-161, "Refinery Report," Form EIA-162, "Bulk Terminal Stocks Report," and Form EIA-163, "Pipeline Products Stocks Report." For survey descriptions and other details see Explanatory Notes 1.1., 1.2, and 1.3.

## Note 2.5 Average Stock Levels

The graphs displaying monthly stock levels of petroleum products, crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquified petroleum gases and ethane, and other products provide the user with recent data as well as a summary of data from the most recent 3 year period from January through December or from July through June. This summary takes the form of an "average range" that includes seasonal variation determined from a longer time period. The average range represents the historical pattern; it is not a forecast.

These curves are updated every 6 months effective January 1 or July 1 by basing the "average ranges" on a more recent time period. At that time, each 3-year data series will be adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors were estimated by means of a seasonal adjustment technique developed at the Bureau of Census (Census X-11). The seasonal factors were assumed to be stable (i.e., unchanging from year to year) and additive (i.e., the series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels). The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors were very small relative to crude oil stock levels. Therefore, the seasonal factors for crude oil stock levels were set to zero. The seasonal factors for total petroleum (crude and products), distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products were derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors were based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973 and 1974 appeared to be different from those in recent years. It was therefore assumed that the seasonal patterns in 1973, 1974, and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for total petroleum (crude and products), crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3 year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the "average range" is twice this standard error.

The upper curve of the "average range" is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

## Note 2.6 Movements

Movements of crude oil between PAD Districts are reported on Form EIA-170, "Tanker and Barge Report." Petroleum product movements are reported on Forms EIA-170 and EIA-89, "Pipeline Products Report." Net receipts are calculated by summing total movements into and total movements from each PAD District by pipelines, tankers, and barges, and subtracting for the difference. Movements of crude oil by pipeline are not reported. For survey descriptions and other detail, see Explanatory Notes 1.2 and 1.4.

## Note 2.7 Preliminary Monthly Statistics

Data from the Weekly Petroleum Reporting System (Forms EIA-161, 162, 163, 164 and 165) are used to estimate the most recent monthly values for the historical statistics. Since some of the weekly reporting periods overlap 2 adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To calculate monthly estimates of crude oil and petroleum product imports, crude oil input to refineries, and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel and residual fuel) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the 2 weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of earlier of the 2 weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 2.2.

## Note 3 Accuracy of Petroleum Supply Data

Early in 1981, the Energy Information Administration completed an assessment of the accuracy of principal petroleum supply data series. <sup>1</sup>This assessment concentrated on two methods of analysis:

- Comparisons between EIA's final annual estimates published in the *Petroleum Statement Annual (PSA)* and annual estimates from independent sources.

- Comparisons between EIA's final monthly estimates published in the *PSA* and EIA's earlier estimates published in the *Monthly Petroleum Statistics Report* and the *Petroleum Statement, Monthly* (predecessor of the *Monthly Petroleum Statement*).

Selected excerpts from these comparisons are presented below.

### Comparisons of Annual Estimates

All of the systems that provide data for the *Petroleum Supply Monthly*, except for the weekly systems, try to collect data from the entire universe of their potential respondents. They do not sample, and have no sampling errors. Inaccuracies in the data still occur because of problems such as incomplete lists of respondents, errors in the responses, and conceptual errors in the design of the data systems. Such inaccuracies are hard to identify and even harder to quantify. Some understanding of the overall accuracy of the estimates can be achieved by comparing estimates derived from independent sources of data, as shown in the following tables. Close agreements among annual estimates from several independent sources support the conclusion that the estimates are accurate, and accuracy in the annual estimates implies accuracy in the monthly estimates that comprise the annual estimates.

### Crude Oil Production

Comparisons among independent estimates of annual crude oil and lease condensate production lead to the conclusion that the *PSA* estimates are probably accurate to within 1 percent.

### Crude Oil Imports

Comparisons among independent estimates of annual crude oil imports lead to the conclusion that the *PSA* estimates are probably accurate to within 1 percent. This conclusion is supported by a study of EIA and Customs/Census import data performed for EIA.<sup>2</sup>

### Motor Gasoline Supplied

Comparisons among independent estimates of the annual volume of motor gasoline supplied for domestic use show that differences in the estimates grew between 1977 and 1979. By 1979, the EIA estimate of sales by refiners and the Environmental Protection Agency's estimate of production had grown about 5-7 percent larger than the comparable *PSA*, Lundberg, and American Petroleum Institute (API) estimates. Research conducted by EIA in 1979 and 1980<sup>3</sup> confirmed that the lower

<sup>1</sup>*An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292, June 1981.

<sup>2</sup>Maxima Corporation, *Petroleum Imports Reporting Systems, Preliminary Draft*, (Silver Spring, Maryland: February 1980). Prepared for the Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, Washington, D.C.

<sup>3</sup>Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *An Evaluation of Published EIA Gasoline Supply Estimates* (Washington, D.C.: April 1980).

estimates were inaccurate, and identified changes in the petroleum industry that had an adverse effect on the PSA estimate. During 1980, EIA developed and tested improved procedures for collecting petroleum supply data, and implemented them in January 1981. (See Explanatory Note 4.)

### Distillate Fuel Oil Supplied

Comparisons among independent estimates of the annual volume of distillate fuel oil supplied for domestic use lead to the conclusion that the PSA estimates are probably accurate to within 1 to 2 percent.

### Residual Fuel Oil Supplied

Comparisons among independent estimates of the annual volume of residual fuel oil supplied for domestic use seem to show sizable and consistent differences between the EIA estimates of sales by refiners and the PSA and API estimates. When imports of residual fuel oil by nonrefiners are added to the refiner sales, however, the difference between refiner sales and the PSA estimates are narrowed to within 1 percent. The comparisons therefore lead to the conclusion that the PSA estimates are probably accurate to within 1 to 2 percent.

### Comparison of Estimates of the Volume of Crude Oil and Lease Condensate Production, 1977-1979

	Estimated Volume of Production in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Comparative Estimate as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from Petroleum Statement Annual <sup>b</sup>	3,121	3,178	3,009	///	///	///
<u>Comparative Estimates</u>						
American Petroleum Institute Estimate from API Monthly Statistical Report <sup>c</sup>	3,130	3,214	3,021	100.3%	101.1%	100.4%
Census Estimate from the Annual Survey of Oil and Gas <sup>d</sup>	—	3,148	3,016	—	99.1%	100.2%
Oil and Gas Journal Estimates <sup>e</sup> of Total Production derived from Monthly Data	3,168	3,165	3,005	101.5%	99.6%	99.9%
EIA Estimate from Annual Survey of Oil and Gas Reserves (EIA-23) <sup>f</sup>	3,102	3,144	3,001	99.4%	98.9%	99.7%

/// = Not applicable

— = Not available

<sup>a</sup>Volumes are rounded to the nearest million barrels.

<sup>b</sup>From Table 6 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979.

<sup>c</sup>From issues of the American Petroleum Institute's *Monthly Statistical Report*. The annual values were obtained by summing the monthly values for each of the twelve-month periods.

<sup>d</sup>From Table 1, p.2 of the Bureau of Census' *Annual Survey of Oil and Gas*, 1978.

<sup>e</sup>From issues of the *Oil and Gas Journal*. Monthly estimates are in thousands of barrels per day. They are converted to millions of barrels by dividing by 1,000 and multiplying by the number of days in the reporting period.

<sup>f</sup>From EIA's *U.S. Crude Oil and Natural Gas Reserves 1979 Annual Report* (Table 19, p. 33), *1978 Annual Report* (Table 16, p. 20), and *1977 Annual Report* (Table 22, p.36).

Geographic coverage: the 50 United States and District of Columbia with adjacent areas of the Outer Continental shelf.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.



# Comparison of Estimates of the Volume of Crude Oil Imports, 1977-1979

	Volume of Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Comparative Estimates as a Percent of the Primary Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate of Receipts at Ports of Entry (ERA-60) from <i>Petroleum Statement, Annual</i> <sup>b</sup>	2,380	2,320	2,414	///	///	///
<u>Comparative Estimates</u>						
American Petroleum Institute Estimate of Receipts as Reported by Refiners <sup>c</sup>	2,346	2,323	2,360	98.6%	100.1%	97.8%
Customs/Census Estimate of Receipts at Ports of Entry (Customs Forms 7501 and 7502) <sup>d</sup>	2,415	2,338	2,431	101.5%	100.8%	100.7%
EIA Estimate of Inputs of Foreign Crude at Refineries (ETA-87) <sup>e</sup>	2,364	2,334	2,431	99.3%	100.6%	100.7%

/// = Not applicable

<sup>a</sup>Volumes are rounded to the nearest million barrels.

<sup>b</sup>From Table 1 in EIA's *Petroleum Statement Annual* 1977, 1978, 1979. This table also includes imports for the Strategic Petroleum Reserve (SPR) which were 7.5 million in 1977, 58.8 million in 1978, and 24.4 million in 1979.

<sup>c</sup>Estimate equals the sum of the annual estimate of imports derived from API's *Monthly Statistics Report* (which excludes imports for SPR), and the EIA estimates for imports for the SPR which are listed in footnote b above. The annual estimates from API data are equal to the sum of the API monthly estimates weighted by the number of days in each month.

<sup>d</sup>Data on imports to Puerto Rico which are included in the source for these estimates have been excluded from these estimates in keeping with the geographic coverage of the table. Data are from computer printouts of the Bureau of Census Report IM-245-X dated April 3, 1980 (1977 and 1978 data) and December 19, 1980 (1979 data).

<sup>e</sup>Estimate equals refinery inputs of foreign crude plus (minus) stock increases (decreases) of foreign crude. The data for the computation are published in EIA's *Petroleum Statement, Annuals*. The stock changes (all increases) are derived from data on stocks of crude oil at refineries, bulk terminals, and pipelines as reported on Form EIA-90, plus the increase in the SPR. This estimate excludes crude oil imported and not used as refinery input.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

**Comparison of Estimates of the Volume of Motor Gasoline Supplied for Domestic Use, 1977-1979**

	Volume in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Volume Supplied as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement, Annual</i> <sup>b</sup>	2,573	2,711	2,625	///	///	///
<b>Comparative Estimates</b>						
EIA Estimate of Sales by Refiners (P-306) <sup>c</sup>	2,708	2,792	2,671	105.2%	103.0%	101.8%
Environmental Protection Agency Estimate derived from Production Data <sup>d</sup>	2,766	2,851	2,706	107.5%	105.2%	103.1%
Lundberg Surveys, Inc. Estimate of U.S. Motor Gasoline Sales <sup>e</sup>	2,631	2,746	2,656	102.3%	101.3%	101.2%
American Petroleum Institute Estimate of Deliveries <sup>f</sup>	2,579	2,697	2,612	100.2%	99.5%	99.5%

/// = Not applicable

<sup>a</sup>Volumes are rounded to the nearest million 42-U.S. gallon barrels.

<sup>b</sup>Derived from Table 2 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979.

<sup>c</sup>Derived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products* 1977, 1978, 1979.

<sup>d</sup>The estimate shown is derived by substituting EIA Domestic Production values with values of domestic production tabulated from the Environmental Protection Agency Bq. Form 3520-2, "Lead Additive Report for Refineries." The EPA production estimates are 2,694 million barrels in 1977, 2,757 in 1978, and 2,648 in 1979 as compared from a summary sheet provided by Mr. Bob Summerhayes of EPA.

<sup>e</sup>From the mid-June issues of the "National Petroleum News," 1979 and 1980.

<sup>f</sup>API publishes monthly estimates in thousands of barrels per month of the volume of motor gasoline delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of motor gasoline multiplied by the number of days per month.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

**Comparison of Estimates of the Volume of Distillate Fuel Oil (Including Kerosene) Supplied for Domestic Use, 1977-1979**

	Volume in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Volume Supplied as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement Annual</i> <sup>b</sup>	1,269	1,307	1,275	///	///	///
<b>Comparative Estimates</b>						
EIA Estimate of Sales by Refiners (P-306) <sup>c</sup>	1,282	1,275	1,242	101.0%	97.6%	97.4%
American Petroleum Institute Estimate of Deliveries <sup>d</sup>	1,291	1,300	1,277	101.7%	99.5%	100.2%

/// = Not applicable

<sup>a</sup>Volumes are rounded to the nearest million 42-U.S. gallon barrels.

<sup>b</sup>Derived from Table 2 in EIA's "Petroleum Statement Annual", 1977, 1978, 1979.

<sup>c</sup>Derived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products*, 1977, 1978, 1979.

<sup>d</sup>API publishes monthly estimates in thousands of barrels per month of the volume of distillate and kerosene delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of distillate and kerosene multiplied by the number of days per month.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

**Comparison of Estimates of the Volume of Residual Fuel Oil Supplied for Domestic Use, 1977-1979.**

	Volume in Millions of 42-U.S. Gallon Barrels <sup>a</sup>			Volume Supplied as a Percent of the PSA Estimates		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement, Annual</i> <sup>b</sup>	1,024	1,095	1,109	///	///	///
<b>Comparative Estimates</b>						
EIA Estimate of Sales by Refiners (P-306) <sup>c</sup>	796	832	847	80.8%	79.6%	80.1%
American Petroleum Institute Estimate of Deliveries <sup>d</sup>	1,044	1,101	1,114	102.0%	100.5%	100.4%

/// = Not Applicable

<sup>a</sup>Volumes are rounded to the nearest million 42-U.S. gallon barrels.

<sup>b</sup>Derived From Table 2 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979. Refinery fuel use, subtracted from the figures in the source referenced below, has been reinstated in these estimates.

<sup>c</sup>Derived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products*, 1977, 1978, 1979.

<sup>d</sup>API publishes monthly estimates in thousands of barrels per month of the volume of residual fuel oil delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of residual fuel oil multiplied by the number of days per month.

Geographic Coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

## Comparisons of Monthly Estimates Over Time

Inaccuracies in petroleum data resulting from incomplete or delayed reports from respondents and from data processing errors are usually eliminated from the final PSA estimates. Such inaccuracies can still have important effects on the monthly estimates published in the *Petroleum Supply Monthly* and its predecessors. The following tables compare the initial monthly estimates published in the *Monthly Petroleum Statistics Report* and the *Petroleum Statement, Monthly* with the final monthly estimates published in the PSA. During 1977-1979, the *Monthly Petroleum Statistics Report* was published about 60 days after the end of the reporting month, and the *Petroleum Statement, Monthly* was published about 120-150 days after the end of the reporting month. The tables show that, both in terms of bias and in terms of standard deviation, the later estimates are consistently more accurate than the earlier estimates. In spite of this, the earlier estimates may have been more valuable to users of energy information because of the large difference in timeliness.

For purposes of comparison, the *Petroleum Supply Monthly* is scheduled to be published on about the same time lag as the *Monthly Petroleum Statistics Report*. Caution should be exercised, however, in drawing conclusions from this similarity. The *Petroleum Supply Monthly* uses improved data processing procedures developed and successfully implemented during 1981. In addition, since 1979, EIA has greatly improved the accuracy of its 60-day crude oil production estimates and is making progress in improving the accuracy of its 60-day import estimates.

**Initial Monthly Estimates of Production, Stocks, and Imports of Crude Oil As A Percent of EIA's Final Published Estimates <sup>a</sup>**  
**January 1977 - December 1979**

	<u>Production During Month</u>		<u>Primary Stocks At End of Month</u>		<u>Imports During Month</u>	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> <sup>b</sup>	# 98.7%	1.6%	# 98.3%	1.4%	# 95.4%	2.4%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> <sup>c</sup>	# 99.6%	0.6%	100.0%	0.1%	# 98.4%	1.3%

**Initial Monthly Estimates of Products Supplied for Domestic Use as A Percent of EIA's Final Published Estimates <sup>a</sup>**  
**January 1977 - December 1979**

	<u>Motor Gasoline</u>		<u>Distillate Fuel Oil</u>		<u>Residual Fuel Oil</u>	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> <sup>b</sup>	99.9%	1.8%	99.9%	2.3%	# 97.9%	2.7%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> <sup>c</sup>	100.0%	0.8%	99.7%	0.5%	99.4%	1.2%

**Initial Monthly Estimates of End-of-Month Primary Stocks As a Percent of EIA's Final Published Estimates <sup>a</sup>**  
**January 1977 - December 1979**

	<u>Motor Gasoline</u>		<u>Distillate Fuel Oil</u>		<u>Residual Fuel Oil</u>	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> <sup>b</sup>	99.7%	0.8%	99.7%	1.1%	100.1%	0.7%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> <sup>c</sup>	99.9%	0.2%	100.0%	0.1%	100.1%	0.5%

# Represents a difference from 100% found to be statistically significant at the 95% level of confidence (n = 36).

<sup>a</sup>Final monthly estimates are from the "Petroleum Statement, Annual" for 1977, 1978 and 1979. The mean percent is calculated as follows: each preliminary estimate is first expressed as a percent of EIA's final published estimate, these are then summed and the sum is divided by the number of estimates. The standard deviation is the square root of the quantity computed by summing the squared deviation of the percents from the mean percent and then dividing by the number of percents.

<sup>b</sup>Based on 36 initial estimates appearing in issues dated January 1977 - December 1979.

<sup>c</sup>Based on 36 initial estimates appearing in issues dated January 1977 - December 1979.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

## Note 4 Changes in Petroleum Industry Reporting

Petroleum statistics contained in this report for all years through 1980 were developed using definitions, concepts, reporting procedures and aggregation methods that are consistent with those developed by the U.S. Bureau of Mines. Research conducted by the Energy Information Administration in 1979 and 1980 indicated that changes had occurred in the petroleum industry that were not being adequately reflected in EIA's reporting systems.

EIA reporting forms, definitions, and procedures were modified beginning in January 1981 to describe industry operations more accurately. Unfortunately, empirical information is not available to precisely measure the data shortcomings throughout 1980. However, estimates of the magnitudes of differences in the major data series are described below to form a basis for comparing 1979, 1980, and 1981 data.

### Motor Gasoline

Prior to 1979, the EIA product-supplied series for motor gasoline was consistently about 2 percent lower than the Federal Highway Administration (FHWA) gasoline-sales data series, which is derived from State tax receipts. This difference increased to about 4 percent in 1979 and 5 percent in 1980. There are two primary causes for this growing difference. First, refinery operations, particularly the flows of unfinished oils and the redesignation of some finished products, were not being accurately described on the EIA survey forms. Second, a large amount of gasoline was being produced away from refineries at "downstream blending stations" to take advantage of provisions in regulations governing the amount of lead that could be added. These blending stations were not reporting gasoline production to the EIA until the data system was changed in January 1981.

Quantitative estimates of the magnitude of the difference—in EIA's gasoline product supplied data in 1979 and 1980 have been made by the EIA and the American Petroleum Institute (API). The following table provides 1979 and 1980 data as published in the *Petroleum Statement Annual*, as well as EIA and API estimates of "recast" motor gasoline product supplied. EIA recast estimates were based upon preliminary monthly information in the *Monthly Petroleum Statement*. The ranges displayed in the EIA column reflect uncertainty in the estimates. Also shown are the FHWA motor gasoline sales statistics for those years. EIA has recently published a study of the quality of these FHWA data.<sup>1</sup>

<sup>1</sup>Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *Error Profile of the Motor Fuel Taxation Data used to Establish and Monitor State Emergency Conservation Targets* (Washington, D.C.: December, 1981).

**Finished Motor Gasoline Product Supplied on Old and New Basis  
(Thousand Barrels per Day)**

	1979				1980			
	EIA Reported	API Recast	EIA Recast	FHWA <sup>1</sup>	EIA Reported	API Recast	EIA Recast	FHWA <sup>1</sup>
Jan	6,830	7,230	7,084- 7,246	6,984	6,323	6,789	6,630- 6,791	6,672
Feb	7,254	7,496	7,389- 7,568	7,538	6,596	6,983	6,831- 7,003	6,830
Mar	7,229	7,414	7,301- 7,463	7,316	6,406	6,753	6,607- 6,768	6,713
Apr	7,055	7,300	7,187- 7,353	7,375	6,800	7,014	6,886- 7,052	6,981
May	7,213	7,429	7,313- 7,475	7,428	6,729	6,954	6,823- 6,984	7,044
Jun	7,191	7,483	7,350- 7,516	7,441	6,657	6,966	6,824- 6,991	7,049
Jul	6,902	7,241	7,105- 7,266	7,299	6,743	6,973	6,960	7,132
Aug	7,330	7,546	7,426- 7,588	7,619	6,648	6,841	6,828	7,090
Sep	6,881	7,122	7,016- 7,262	7,232	6,510	6,692	6,962	6,685
Nov	6,791	7,068	6,956- 7,122	7,142	6,234	6,507	6,516	6,951
Dec	6,730	7,106	6,966- 7,127	7,064	6,632	6,948	6,936	6,993
<b>Average</b>	<b>7,034</b>	<b>7,302</b>	<b>7,183- 7,347</b>	<b>7,309</b>	<b>6,579</b>	<b>6,882</b>	<b>6,806- 6,839</b>	<b>6,925</b>

<sup>1</sup>FHWA gasoline statistics published in their 1979 Table MF-33G, 08-06-80, contain aviation gasoline as well as motor gasoline. Only motor gasoline data are included in published 1980 data. Consequently, the 1979 data shown above were reduced by subtracting aviation gasoline product supplied quantities as published by EIA in the 1979 *Petroleum Statement Annual*. The 1980 FHWA data published in their 1980 Table MF-33GA, August 1981, did not require this adjustment.

### Distillate and Residual Fuel Oil

Distillate and residual fuel oil refinery production statistics through 1980 were adjusted to account for an imbalance between unfinished oil supply and disposition. The reported quantities of refinery inputs of unfinished oils typically exceed the available supply of unfinished oils. It has been assumed that this occurs when distillate and residual fuel oil produced by a refinery is shipped to another refinery, where it is treated as unfinished oil. This oil is then reprocessed rather than used or sold as distillate or residual fuel oil.

For many years (including 1980), the difference between unfinished oil disposition and supply was subtracted from distillate and residual fuel oil production to adjust for this discrepancy. Two-thirds of the difference was applied to distillate, and one-third to residual fuel oil.

Beginning in January 1981 this adjustment was discontinued because there was not sufficient empirical evidence to support it. The following table presents distillate and residual fuel oil refinery production in 1980 as published (adjusted) and on the same basis as 1981 statistics are now being completed (unadjusted) to permit comparison between 1980 and 1981 data series. Adjusted distillate and residual fuel oil product supplied volumes differ from the unadjusted volumes by the same amounts as the adjusted and unadjusted production volumes.

**Adjusted and Unadjusted Refinery Production, and Unadjusted Product Supplied of Distillate and Residual Fuel Oils, by Month for 1979 and 1980 (Thousand Barrels Per Day)**

**1979**

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,043	3,108	65	4,646	1,912	1,946	34	3,594
Feb.	2,888	2,945	57	4,869	1,792	1,822	30	3,625
Mar.	3,019	3,026	7	3,671	1,719	1,723	4	3,243
Apr.	2,945	2,978	32	3,048	1,639	1,656	17	2,524
May	3,066	3,093	27	3,025	1,586	1,600	14	2,517
Jun.	3,153	3,187	35	2,743	1,548	1,566	18	2,601
Jul.	3,305	3,344	38	2,601	1,575	1,594	20	2,471
Aug.	3,321	3,359	38	2,799	1,584	1,603	20	2,570
Sep.	3,354	3,306	-48	2,599	1,627	1,602	-25	2,584
Oct.	3,251	3,217	-34	3,085	1,629	1,612	-17	2,523
Nov.	3,239	3,200	-39	3,208	1,736	1,716	-20	2,795
Dec.	3,221	3,238	17	3,725	1,894	1,903	9	3,022
Average	3,152	3,169	16	3,327	1,687	1,695	8	2,834

**1980**

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,013	3,093	80	3,794	1,771	1,812	41	3,108
Feb.	2,766	2,888	122	3,834	1,773	1,836	63	3,168
Mar.	2,557	2,690	133	3,312	1,584	1,652	68	2,726
Apr.	2,460	2,554	94	2,729	1,595	1,643	48	2,492
May	2,474	2,610	136	2,538	1,509	1,579	70	2,305
Jun.	2,646	2,721	75	2,392	1,575	1,613	38	2,359
Jul.	2,689	2,783	94	2,343	1,480	1,528	48	2,339
Aug.	2,461	2,582	121	2,258	1,444	1,506	62	2,348
Sep.	2,686	2,726	40	2,627	1,495	1,516	21	2,380
Oct.	2,589	2,650	61	2,981	1,512	1,543	31	2,258
Nov.	2,703	2,823	120	3,069	1,579	1,641	62	2,513
Dec.	2,891	3,052	161	3,776	1,660	1,743	83	2,762
Average	2,661	2,764	103	2,969	1,580	1,634	54	2,562

**Total Petroleum Products**

The imbalance between the supply and disposition of unfinished oils is now reported as part of the reclassified products (line 39) in the U.S. Petroleum Balance (Table 1). Imbalances between the supply and disposition of gasoline blending components comprise the remainder of the reclassified in Table 1. These imbalances are reported as negative product supplied in the Other Liquids section of the table of Supply and Disposition Statistics (Table 2). Since these changes only involve redistribution of the volumes of gasoline, distillate and residual fuel oil, gasoline blending components, and unfinished oils, the total volume of petroleum products supplied remains unaffected by them.

## Note 5 Notes on Tables

**5.1 Crude Oil and Petroleum Products Overview** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Plant Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Plant Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Petroleum Products Exports is the sum of Natural Gas Plant Liquids and LRGs, Other Liquids, and Finished Petroleum Products Exports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousands of barrels in Table 2.

**5.2 Crude Oil Supply and Disposition** statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousands of barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousands of barrels in Table 2.

- Total Imports appear in Table 4.

**5.3 Finished Motor Gasoline Supply and Disposition** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending Stocks appear in thousands of barrels in Table 2.

**5.4 Distillate and Residual Fuel Oil Supply and Disposition** statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Crude Used Directly, Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousands of barrels in Table 2.

**5.5 Liquefied Petroleum Gases and Ethane** statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.



- Total Production is the sum of Field Production and Refinery Production in Table 4.
- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.
- Ending stocks appear in thousands of barrels in Table 2.

**5.6 Other Petroleum Products Supply and Disposition** statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.
- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.
- Ending stocks are aggregated from ending stocks in thousands of barrels in Table 2.

#### **Note 5.7 Table 1. U.S. Petroleum Balance**

- Lines (1) through (3) of Table 1: Crude oil (including lease condensate) production for "Alaska," "Lower 48 States," and "Total U.S." are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 2.2), and taking the difference to equal production in the lower 48 states.
- Line (5) of Table 1: SPR imports are reported on Survey Form ERA-60.
- Line (12) of Table 1: "Total Other Sources" equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil plus crude used as fuel and losses in Table 2.
- Line (14) of Table 1: Natural gas plant liquids (NGPL) "Production" equals field production of natural gas plant liquids (NGPL) plus field production of finished petroleum products in Table 2.
- Line (15) of Table 1: NGPL "Imports" equals the sum of the imports of natural gasoline and isopentane, unfractionated stream, and plant condensate imports in Table 2.
- Line (16) of Table 1: NGPL "Stock Withdrawal (+) or Addition (-)" is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate in Table 2.
- Line (17) of Table 1 equals the sum of lines (14), (15), and (16) of Table 1.
- Line (18) of Table 1: unfinished oils and gasoline blending components "Stock Withdrawal (+) or Addition (-)" equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.
- Line (20) of Table 1: "Other Hydrocarbons and Alcohol New Supply" equals the field production of same in Table 2.
- Line (21) on Table 1: "Refinery Processing Gain" is a balancing item equal to total refinery production minus total refinery input in Table 2.
- Line (22) on Table 1: "Crude Used Directly" equals the sum of crude oil used directly as distillate and residual fuel oils in Table 2.
- Line (23) of Table 1: "Total Other Liquids" equals the sum of lines (18) through (22) of Table 1.
- Line (24) of Table 1: "Total Production of Products" equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or

addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil used as distillate and residual fuel oils in Table 2.

- Line (25) of Table 1: "Gross Imports of Refined Products" equals imports of LPG and ethane plus imports of finished petroleum products in Table 2.

- Line (26) of Table 1: "Exports of Refined Products" equals exports of LPG and ethane plus exports of finished petroleum products in Table 2.

- Line (27) of Table 1: "Net Imports of Refined Products" equals the difference between lines (25) and (26) of Table (1).

- Line (28) of Table 1: "Total New Supply of Products" equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil used as distillate and residual fuel oils; plus imports of LPG and ethane and finished petroleum products; minus exports of LPG and ethane and finished petroleum products in Table 2.

- Line (29) of Table 1: "Refined Products Stocks Withdrawal (+) or Addition (-) equals the sum of stock withdrawal (+) or addition (-) for LPG and ethane, and finished petroleum products in Table 2.

- Line (30) of Table 1: "Total Petroleum Products Supplied for Domestic Use" equals total products supplied in Table 2.

- Lines (31) through (37) of Table 1 equal the respective products supplied in Table 2.

- Line (38) of Table 1: "Other Products Supplied" equals the sum of natural gasoline and isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F for petrochemical feedstock uses, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, and miscellaneous products supplied in Table 2.

- Line (39) of Table 1: "Total Reclassified" is a balancing item equal to the sum of unfinished oils, motor gasoline blending components, and aviation gasoline blending components products supplied in Table 2.

- Line (40) of Table 1: "Total Product Supplied" is equal to total products supplied in Table 2.

- The sum of lines (41) and (42) of Table 1, stocks of "Crude Oil and Lease Condensate (Excluding SPR)" and stocks held by the "Strategic Petroleum Reserve," equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-90.

- Line (46) of Table 1, stocks of "Refined Products," equals the sum of LPG and ethane and finished petroleum product stocks in Table 2.



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